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Summary

Reference	12/00047/FUL
Alternative Reference	PP-01696093
Application Received	Wed 18 Jan 2012
Application Validated	Wed 18 Jan 2012
Address	Bluewater Coach Park Bluewater Parkway Bluewater
Proposal	Erection of a five storey 110 bedroom hotel (Use Class C1) with associated parking and highways and landscaping works
Status	Decided
Decision	Application Permitted
Decision Issued Date	Mon 14 May 2012
Appeal Status	Not Available
Appeal Decision	Not Available

Further Information

Application Type	Full Application
Decision	Application Permitted
Actual Decision Level	Delegated Decision
Expected Decision Level	Not Available
Case Officer	Mr P Nicholls
Parish	Stone Parish Council OLD 2019
Ward	Stone OLD
District Reference	Not Available
Applicant Name	Lend Lease Global Investments Plc
Agent Name	GVA Grimley

Agent Company Name	Not Available
Agent Address	10 Stratton Street London W1X 6JR
Environmental Assessment Requested	No

Contacts

Ward Councillors

Councillor Jonathon Simon Hawkes

Address	Civic Centre Home Gardens Dartford Kent DA1 1DR
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Councillor John Burrell

Address	7 Trivett Close Greehithe Kent DA9 9PL
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Councillor Lucy A Canham

Address	C/O Civic Centre Home Gardens Dartford Kent DA1 1DR
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Important Dates

Application Received Date	Wed 18 Jan 2012
Application Validated Date	Wed 18 Jan 2012
Expiry Date	Tue 14 Feb 2012
Actual Committee Date	Not Available
Latest Neighbour Consultation Date	Tue 24 Jan 2012
Neighbour Consultation Expiry Date	Tue 14 Feb 2012
Standard Consultation Date	Tue 24 Jan 2012
Standard Consultation Expiry Date	Tue 14 Feb 2012
Last Advertised In Press Date	Not Available
Latest Advertisement Expiry Date	Not Available
Last Site Notice Posted Date	Not Available

Latest Site Notice Expiry Date	Not Available
Internal Target Date	Wed 18 Apr 2012
Agreed Expiry Date	Not Available
Decision Issued Date	Mon 14 May 2012
Permission Expiry Date	Thu 14 May 2015
Decision Printed Date	Mon 14 May 2012
Environmental Impact Assessment Received	Not Available
Determination Deadline	Wed 18 Apr 2012
Temporary Permission Expiry Date	Not Available

Constraints

Name	Constraint Type	Status
Not Green Belt	Greenbelt	Not Available
Thames Water Authority	Thames Water	Confirmed
Radon Area 1%	Radon Areas	Confirmed
Groundwater Aquifer	Aquifer Protection Zone	Confirmed
Smoke Control Order No. 18	Smoke Control Area	Confirmed
BC Officer Areas - Nick Tremain	Building Control Officer	Confirmed
Windturbine Development Safeguarding	Windturbine Development Safeguarding	Confirmed
Stone Civil Parish	Property within a Parish	Confirmed
Groundwater Source Protection Zone 2 - Outer Protection Zone	Ground Water Source Protection Zone	Confirmed
Not Available	Planning Aspects	Not Available
Not Available	Highway Aspects	Not Available

Related Information

There are 22 documents associated with this application.

There are 0 cases associated with this application.

There are 2 properties associated with this application.

Reference Code of Application:
DA/12/00047/FUL

Lend Lease Global Investments Plc
C/O GVA Grimley
10 Stratton Street
London
W1X 6JR

**TOWN AND COUNTRY PLANNING ACT 1990
TOWN AND COUNTRY PLANNING (DEVELOPMENT MANAGEMENT PROCEDURE)
(ENGLAND) ORDER 2010**

**Notification of Grant of permission
to Develop Land**

TAKE NOTICE that the **DARTFORD BOROUGH COUNCIL**, the district planning authority under the Town and Country Planning Acts, **HAS GRANTED PERMISSION** for the development of land situated at **Bluewater Coach Park Bluewater Parkway Bluewater**

Referred to in your application for permission for development registered on the 18th January 2012

And being

Erection of a five storey 110 bedroom hotel (Use Class C1) with associated parking and highways and landscaping works

As shown in Drawing No's: P1001 Revision A; P1002 Revision A; P1003 Revision A; P1004 Revision A; P1005 Revision A; P1006 Revision A; P1007 Revision A; P1008 Revision A; P1009 Revision A; P1010 Revision A; P1011 Revision A; P1012 Revision A; P1013 Revision A; P1014 Revision A; Planning Statement (January 2012); Ecological Assessment (December 2011); Arboricultural Impact Assessment (ref: GVA/BWH/AIA/01); Sustainability Statement (21/12/11); Transport Statement (ref: 25596/001, dated December 2011); Design and Access Statement (ref: 1228)

Permission is GRANTED subject to the following condition(s):

Time Limits

- 01 The development hereby permitted shall be begun before the expiration of three years from the date of this permission.

Before Development Commences

- 02 Before commencement of any building operations on site (including demolition), effective wheel washing plant and equipment shall be installed on the site in accordance with details to be submitted to and approved by the Local Planning Authority and thereafter maintained in full working order in accordance with the approved details, until the development has been completed. No vehicles shall leave the site until their wheels, chassis and external bodywork have been effectively cleaned and washed free of earth, mud, clay, gravel, stones or any other similar

substance.

- 03 Development shall not commence until a drainage strategy detailing any on and/or off site drainage works, based on sustainable drainage principles and an assessment of the hydrological and hydrogeological context of the development, has been submitted to and approved by, the Local Planning Authority in consultation with the sewerage undertaker and the Environment Agency. No discharge of foul or surface water from the site shall be accepted into the public system until the drainage works referred to in the strategy have been completed.
- 04 Prior to the commencement of development, impact studies of the existing water supply infrastructure should be submitted to and approved in writing by the Local Planning Authority in consultation with the relevant water undertaker. The studies should determine the magnitude of any new additional capacity required in the system and a suitable connection point.
- 05 Prior to the commencement of the use hereby approved, a scheme in relation to odour and noise control shall be implemented in accordance with details to be submitted to and approved by the Local Planning Authority beforehand. The scheme should include a full spectrum octave analysis of the ventilation fan, demonstrating that NR 35 will not be breached at the nearest noise sensitive premises/site boundary, and also full details of the proposed odour control. Structural transmission shall also be considered with the use of anti-vibration mounts where necessary. The installed odour and noise control scheme shall thereafter be maintained in working order in accordance with the approved details.
- 06 No development shall take place, including enabling, demolition and construction works, until a Construction Method Statement has been submitted to and approved in writing by the Local Planning Authority. The approved Statement shall be adhered to throughout the construction period. The Statement shall include the following details:
- A scheme to minimise the noise and vibration impact of enabling/demolition/construction activities complying with guidance found in BS 5228-1:2009 and BS 5228-2:2009;
 - Hours of noisier types of working, such as piling;
 - A scheme to mitigate/suppress the emission of dust in line with the Control of Dust from Construction Sites (BRE DTi Feb 2003);
 - Details of construction lighting together with measures to minimise light pollution;
 - Measures to regulate disturbance and disruption to the local community caused by construction activities;
 - Details of public relations providing on site contact details in case of complaint, emergency, query and updates to local residents of activities on site.

Regulation(s) on Site

- 07 No impact piling shall take place until a piling method statement (detailing the type of piling to be undertaken and the methodology by which such piling will be carried out, including measures to prevent and minimise the potential for damage to subsurface water or groundwater sewerage infrastructure, and the programme for the works) has been submitted to and approved in writing by the Local Planning Authority in consultation with the relevant water or sewerage undertaker and the Environment Agency. Any piling must be undertaken in accordance with the terms of the approved piling method statement.

- 08 No construction work shall take place on the site outside the hours of 0800 to 1800 Mondays to Fridays inclusive, and 0800 to 1300 on Saturdays with no working on Sundays and Bank Holidays.

Before Occupation

- 09 The landscaping scheme hereby approved as an integral part of the development shall, at the latest, be implemented during the first planting season (between October and March inclusive) following completion of the development and shall thereafter be maintained for a period of five years. Any trees, shrubs or grassed areas which die, are diseased or vandalised within this period shall be replaced within the next planting season.
- 10 Prior to occupation of the premises details of any plant (including extraction, ventilation, refrigeration and air conditioning) or ducting system to be used in pursuance of this permission shall be subject to a noise and vibration assessment, the results of which shall be submitted to and approved in writing by the Local Planning Authority. Structural transmission shall also be assessed with the use of anti-vibration mounts where appropriate. The development shall be carried out in accordance with the approved details. The noise attenuation scheme shall ensure that the noise generated at the boundary of any guest bedrooms (reflecting a worst case scenario with all plant running at full load at the most sensitive time of use) shall not exceed Noise Rating Curve NR35 as defined by BS 8233:1999 and the Chartered Institute of Building Services Engineers (CIBSE) Environmental Design Guide 2006. The equipment shall be maintained in a condition so that it does not exceed NR35, as described above, whenever it is operating. After installation of the approved plant, no new plant or ducting system shall be used without the written consent of the Local Planning Authority.

Ongoing Condition(s)

- 11 The 88 car parking spaces, turning areas and means of access shown on the approved plans shall be provided prior to occupation of the building(s) hereby approved and kept available for such use at all times and no development, whether permitted by the Town and Country Planning (General Permitted Development) Order 1995 or not, shall be carried out on that area of land or to preclude vehicular access thereto.
- 12 Prior to occupation of the development hereby approved, the secure cycle parking shall be provided as shown on the plans hereby approved, and shall thereafter be maintained as such.
- 13 There shall be no music and/or any other amplified sound emanating from the bar/restaurant outside the hours of 09:00 to 22:00 on any day.

And for the following reason(s):

- 01 In pursuance of Section 91(1) of the Town and Country Planning Act 1990.
- 02 In the interests of amenity and highway safety in accordance with Policy B1 of the adopted Dartford Local Plan.

- 03 The development may lead to sewerage flooding; to ensure that sufficient capacity is made available to cope with the new development; and in order to avoid adverse environmental impact upon the community.
- 04 To ensure that the water supply infrastructure has sufficient capacity to cope with the/this additional demand.
- 05 In the interests of safety and amenity in accordance with Policies DL1 and DL4 of the adopted Dartford Local Plan.
- 06 In the interests of protecting the amenity of adjoining/nearby residential properties and safeguarding the amenities of the surrounding area.
- 07 The proposed works will be in close proximity to underground water and sewerage utility infrastructure. Piling has the potential to impact on local underground water and sewerage and sewerage utility infrastructure.
- 08 To protect the amenities of the residents of nearby dwellings in accordance with Policies E14 and B1 of the adopted Dartford Local Plan.
- 09 To safeguard the visual amenities of the locality in accordance with Policy B3 of the adopted Dartford Local Plan.
- 10 In the interests of protecting the amenity of adjoining/nearby residential properties.
- 11 To ensure the permanent retention of satisfactory car parking facilities in accordance with the Local Planning Authority's standards and Policies B1 and T23 of the adopted Dartford Local Plan.
- 12 To encourage sustainable methods of transport in accordance with Policy T32 of the adopted Dartford Local Plan.
- 13 To safeguard the noise environment of the surrounding locality in accordance with Policies E14 and B1 of the adopted Dartford Local Plan.

INFORMATIVES

- 01 The applicant is advised to contact Environmental Health on 01322 343434 for technical advice with regards to the submission of odour and noise control measures.
- 02 Should any protected species or evidence of protected species be found prior to or during the development, all works must stop immediately and an ecological consultant or the Council's ecologist must be contacted for further advice before works can proceed. All contractors working on site should be made aware of the advice and provided with the contact details of a relevant ecological consultant.

- 03 Where a developer proposes to discharge groundwater into a public sewer, a groundwater discharge permit will be required. Groundwater discharges typically result from construction site dewatering, deep excavations, basement infiltration, borehole installation, testing and site remediation. Groundwater permit enquiries should be directed to Thames Water's Risk Management Team by telephoning 020 8507 4890 or by e-mailing wwriskmanagement@thameswater.co.uk. Application forms should be completed on line via www.thameswater.co.uk/wastewaterquality. Any discharge made without a permit is deemed illegal and may result in prosecution under the provisions of the Water Industry Act 1991.
- 04 The applicant is advised to contact Thames Water Developer Services on 0845 850 2777 to discuss the details of the piling method statement.

ADDITIONAL INFORMATIVE

The applicant is advised that the granting of planning permission does not negate or override the need to obtain any other necessary consents related to this development and required under separate legislation

Reasons for approving applications:

In the view of the Borough Council, having taken all material considerations into account, there is insufficient demonstrable harm or conflict with policy arising from the proposal to warrant refusing the application. In coming to this decision, particular regard has been had to the following policies:

Core Strategy: CS12, CS15

Dartford Borough Local Plan 1995: B1, B3, B14, R6, T21, T23, T27



Signed.....
Rob Scott – Director of Regeneration

Dated this 14th May 2012

Your attention is drawn to the notes attached

Travelodge Bluewater – Lend Lease

Sustainability Statement

Doc No:
Issue: For Planning
Rev:-
Date:21/12/11

BDP.

Introduction

This document describes the sustainability strategy which forms the basis of the design for the proposed Travelodge Hotel at Bluewater. Our brief was to assist with the design of this new project for which our client has aspirations to build a better building than one might typically expect for a low cost hotel. This quality will be reflected in the construction materials but also in the quality of the engineering design and the buildings' impact on the surrounding area and the environment generally.

Deliverables

The key deliverables for the sustainability statement notwithstanding the ecological surveys and recommendations which are dealt with in a separate section of this planning application are;

- A building which achieves a BREEAM 'Excellent' award which inextricably links the building to a 'B' rated Energy Performance Certificate (EPC).
- A building which has a minimised ecological impact on the surrounding area, which is user friendly and simple to operate and maintain with low ongoing energy demand which outperforms the notional building and the building regulations.
- A building which meets planning and building regulations and in many areas will outperform the minimum requirements.

Design Principles

We will achieve the deliverables set out above by applying the following principles;

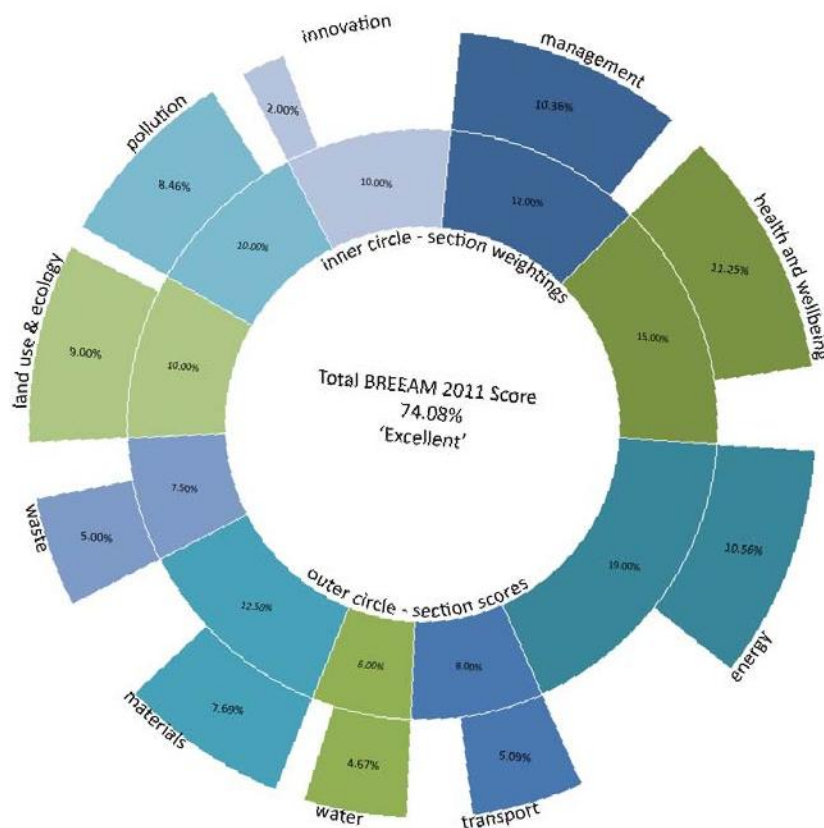
- Utilise the Engineering and Architectural design to produce a building which reduces energy consumption through passive and active energy saving measures. For example; solar shading, solar-control glass and thermal inertia in the form of exposed mass.
- The Architectural design will deliver a building which is of low embodied carbon construction due to its timber frame construction. Additionally, all construction materials will be responsibly sourced as far as is possible.
- On site generation of electricity and hot water from a low carbon source. The current proposal is to use a Combined Heating and Power plant (CHP) to generate electricity and hot water for domestic use which for a building such as this represents a large proportion of the energy demand, although this strategy needs to be verified as part of the detailed design work in terms of providing the most appropriate low carbon solution. Utilising a decentralised energy source provides an increase in efficiencies and a reduction in carbon emissions attributed to centralised grid supplied energy.
- Employ good management practice during the design and construction phase to minimise the amount of waste and environmental impact owing to the construction process and the ongoing operation of the building.
- Targeting BREEAM credits which maximise the health and wellbeing of building users, such as cyclist facilities and lighting efficiencies. Additionally, the specification of heating, lighting and ventilation control will provide suitable tailoring of spaces to maximise comfort, whilst finishes and orientation will ensure a good internal air quality is maintained.
- Employing sensible energy saving measures such as air source heat pumps for the front of house areas which require cooling, elsewhere natural ventilation will be used. Extensive metering will be employed to ensure that energy consumption is monitored to promote measures for reduction.
- In terms of transport, the hotel will seamlessly integrate with the wider Bluewater travel plan, and the existing public transport links will promote sustainable modes of transport to and from the site.

- Employing water saving techniques such as installing rainwater capture for irrigation and low-flow fixtures and fittings in the bathrooms.
- Increasing the site's ecology through sensitive and native planting and landscaping.
- Ensuring that the development does not increase the risk of flooding to surrounding areas through suitable attenuation measures. Additionally, the risk of flooding to the site itself is will be minimised and the ingress of pollutants to water-courses prevented through appropriate techniques.

Modelling and BREEAM Pre-assessment

We have employed dynamic thermal simulations which have also been used to calculate EPC certificates for our preferred engineering solution and to assess the performance of the building envelope. Additionally the model was used to investigate the benefit in providing passive energy saving features such as solar shading, and exposed thermal mass. This information has been fed-back into the architectural design and combined with the above strategies to expedite the route to obtaining a BREEAM 'Excellent' rating and a building which has lower energy consumption and carbon emissions.

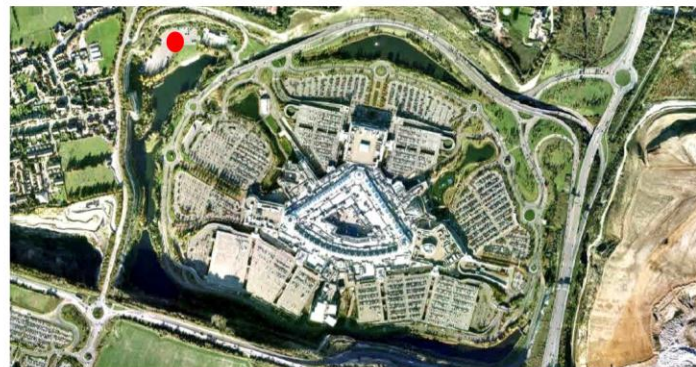
Below is our summary of the BREEAM pre-assessment for this project developed to represent the design solution. This is a product of detailed discussions with the client, architectural and engineering teams, and BREEAM assessor. The outcome is a predicted BREEAM score of 74.08% which is a solid 'Excellent' rating, as with all BREEAM pre-assessments which by their nature are based on early engineering calculations and assumptions, there is margin for error and the potential for the score to change as the design develops. However, the project team are aware of what this target involves and are fully committed to obtaining a minimum of an 'Excellent' rating; a notable achievement for a hotel of this nature.



1228 - Hotel Bluewater – Design & Access Statement

Site Location & Proposed Use

The proposal is for a 110 bedroom hotel at Bluewater, Dartford, Kent, to support the recently completed and operating events venue known as Glow. The site is the existing coach park which lies at the north eastern edge of the Bluewater estate facing the lake (5B) to the south east. Immediately to the north and western edges of the site is the existing chalk escarpment. Further to the west is the Bluewater shopping centre.



LEND LEASE
HOTEL BLUE WATER
INITIAL REVIEW

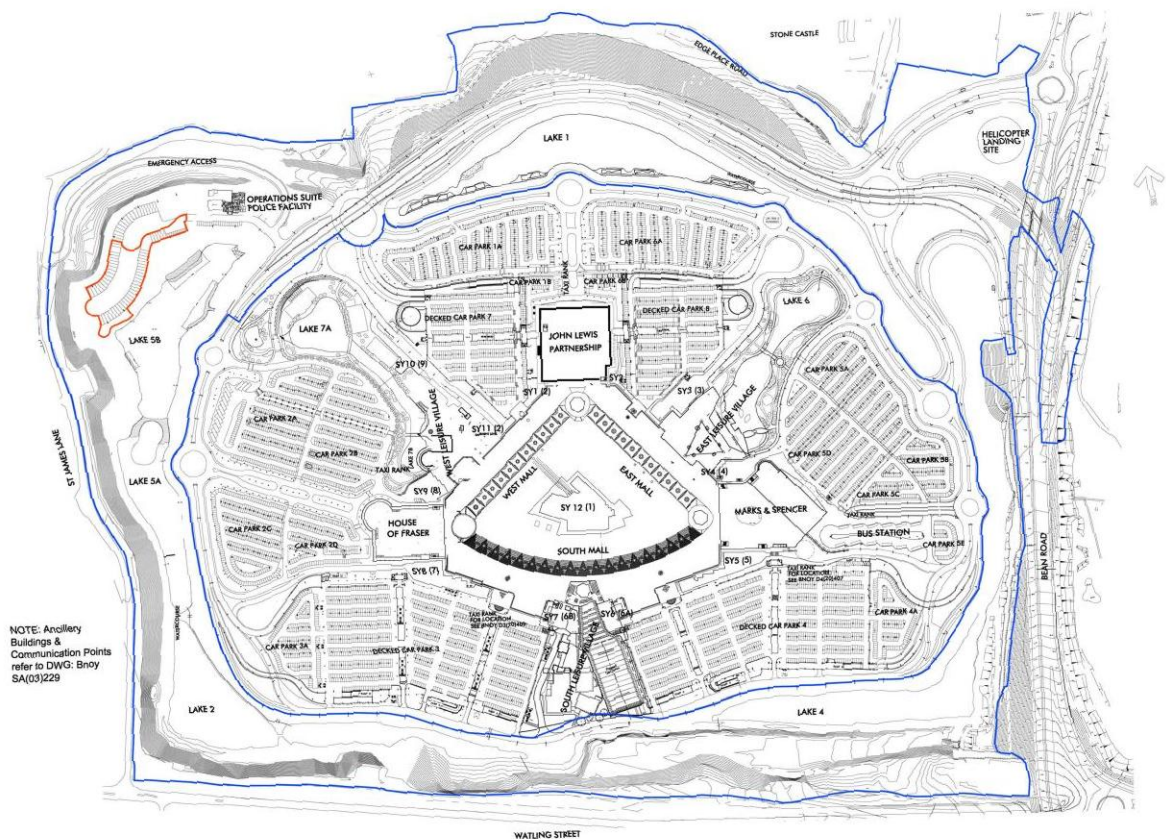
AERIAL PHOTOGRAPHS

1228.B1.002 29 MARCH 2011

The site is accessed off the perimeter road which runs around the centre and connects with Bean Road – the A 255. The A255 connects to Greenhithe to the north and the A2 to the south.

Pedestrian access to the site includes various routes connected to the pedestrian foot path network running through Bluewater. This network in the main is remote from the vehicular highway and the most direct pedestrian access from the shopping centre runs safely under the main perimeter road via a well lit and accessibly foot tunnel. All of the pedestrian routes are step free and afford access to people of differing mobilities.

Bluewater has excellent connection with public transport and the main bus station lies on the east side of the centre.



The site highlighted in red sits in the north eastern part of the Bluewater estate sitting between Lake 5b and the chalk escarpment. It is connected to the centre via the pedestrian footpath links for safe access to the venue and is connected to the outer perimeter road for vehicle access.

Existing Site

The general composition of the site and its immediate area is made up of four key elements – the existing tarmac coach park, the chalk escarpment, the soft landscape and the lake. The overall site is generally flat with the principle level change being between the water level of the lake and the surrounding landscape. The landscaping is to a high standard incorporating wooded areas, specimen trees and shrubs with grassland. The landscape is well maintained being part of the Bluewater estate. A footpath runs around the lake affording a pleasant walking environment to enjoy the landscape and wildlife.



EAST PANORAMA



SOUTH PANORAMA

LEND LEASE
HOTEL BLUE WATER
INITIAL REVIEW

PANORAMIC PHOTOGRAPHS

1228.B1.004 29 MARCH 2011

The site sits between the lake and the chalk escarpment which rises to some 40 metres above the level of the lake.



ESCARPMENT PANORAMA



MAIN CENTRE PANORAMA

LEND LEASE
HOTEL BLUE WATER
INITIAL REVIEW

PANORAMIC PHOTOGRAPHS

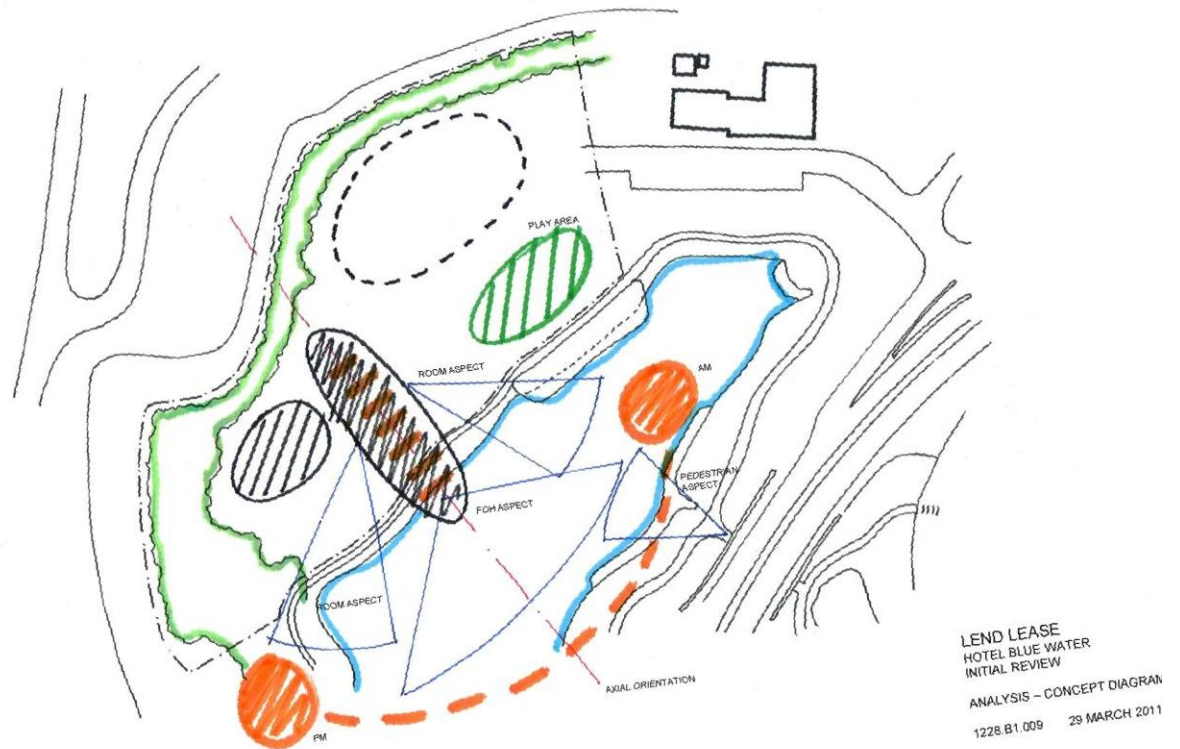
1228.B1.006 29 MARCH 2011

The coach park can be seen in the foreground at the base of the escarpment in the top picture. The lower picture is the view from the car park adjacent the John Lewis department store.

Design Approach

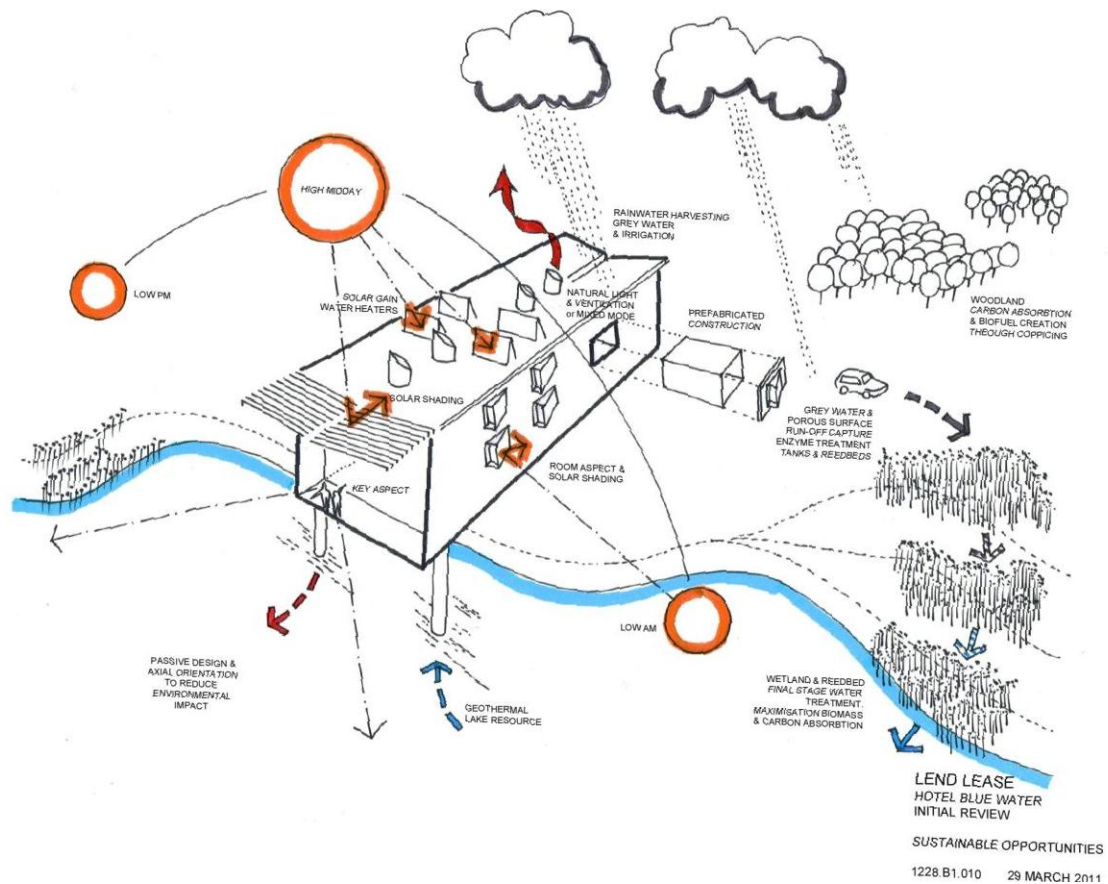
The initial analysis of the site indicates that the overall site is greater in area than that required for a hotel with its associated car parking and landscape. The site therefore has been looked at as multiple zones for integration and future use to optimise the site layout. The existing landscape and views to and from the lake have also been considered as being important in the overall master planning.

In developing option layouts for the site as part of the master plan we have also taken a keen interest in developing a design that minimises its environmental impact on the site and its immediate environment. We have also sought to achieve a passive design to minimise the energy consumption of the building in use and in consequence to reduce the carbon footprint.



Our sketch Concept Diagram 1228:B1:009 sets out how the site could be arranged to achieve the optimum layout taking into consideration the parameters set out above.

In this diagram the building is located to the eastern portion of the site leaving the western zone to accommodate the remaining coach park which is a current requirement at Bluewater. The building itself is orientated as close to a north south axis to reduce solar gain as part of the passive design approach with the bedroom windows principally set on the east and west elevations. The Bar Café and reception will be located to the south to enjoy the aspect across the lake.



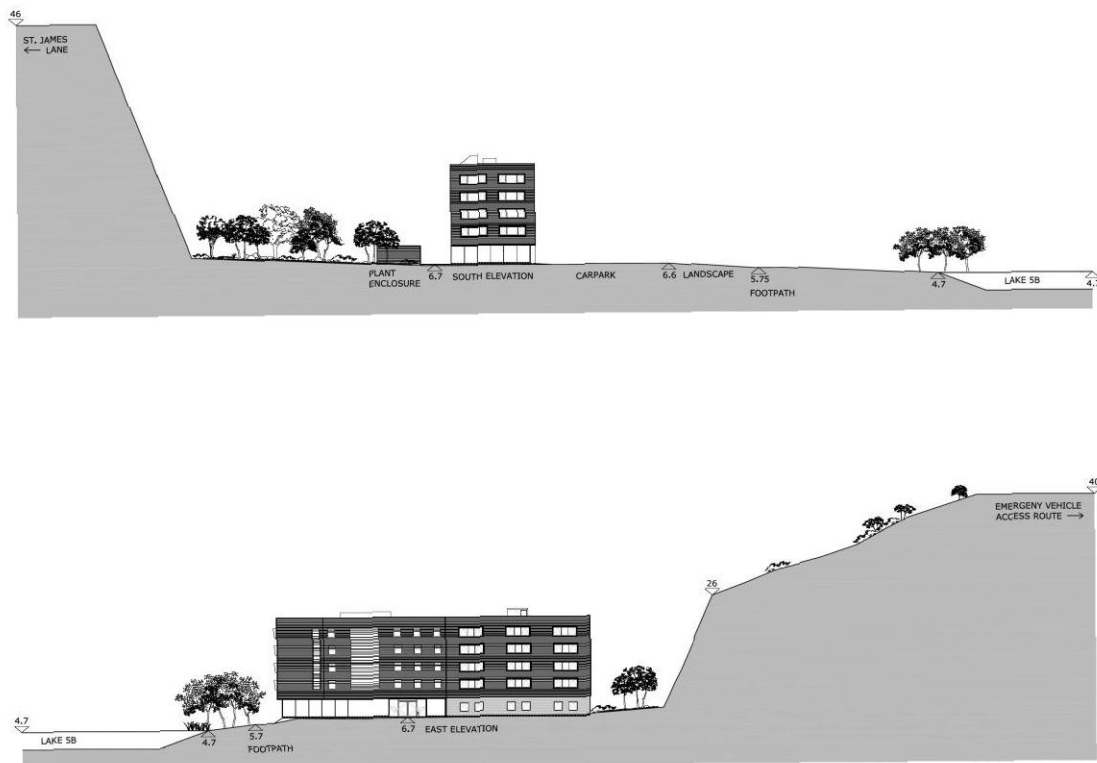
Our sketch diagram Sustainable Opportunities 1228:B1:010 sets out the opportunities to achieve the ideal passive design taking account the site and the optimum orientation. Subsequent design development has considered these opportunities and in summary has included some and discounted others as follows:

- The use of the lake as a geothermal store has been discounted as the lake is shallow and has a relatively small thermal mass. The lake is also a very sensitive part of the current wetland habitat and is controlled under licence through the Environmental Agency in terms of quality of water and quantity discharging into Lake 2 which is directly connected to subterranean aquifer. The cantilevered or propped construction would be extremely difficult to achieve and could have a detrimental effect on the wetland environment.
- Solar shading; natural ventilation and natural light; rain water harvesting for irrigation; timber frame pre-fabricated construction; rain water collection and run-off capture through interceptors and reed bed filtration have been incorporated.
- Solar gain water heaters have been discounted as we have opted for a central heat and power generation plant on site to further reduce our energy consumption.

We are committed to achieving BREEAM Excellent for the building and the steps taken above will assist in achieving this.

The further detail development of the site places the new building as much as possible on the existing hard standing of the coach park thereby further reducing the impact on the existing soft landscape and wetland. Furthermore the car parking and vehicle access routes have also been designed to be accommodated on the existing hard standing with only a small area of landscape being disturbed. This small area of new hard standing is more than compensated by returning some of the hard standing back to soft landscaping in the area between the proposed hotel and the retained but smaller coach park.

In seeking to reduce the impact of the footprint of the building we have proposed a building of 5 storeys including the ground floor. The height of the building form and ratio of height to length produces a well balanced proportion and one that sits comfortably against the back drop of the escarpment which rises some forty metres above the general site level. We believe this produces the best balance of building form on the site.



In developing the elevational treatment to the building, materials have been selected which are reflective and sympathetic to the location. The key elevations facing the lake and eastern approach are in the main a

timber horizontal rail cladding with clear glazing to the windows. At the ground floor brick is proposed being more robust, again with clear glazing to the main public areas. The proposed brick is light in colour with a texture to reflect the chalk escarpment. To the rear of the building – the west elevation - the main part is a light coloured render again to reflect the chalk escarpment. The total palette has been selected to be sympathetic, natural and quite restrained.



To maintain the simple lines of the building the roof is set behind a raised parapet to disguise the lift overruns, small plant and water storage enclosures.

Internally the building is laid out to provide clear and easy access to the reception area and throughout the floors with the public restaurant area located at the front of the building to enjoy the views of the lake and immediate landscape. The hotel bedrooms are configured to suit the operator's requirements with a central corridor and all rooms have opening windows to provide individual natural ventilation.

The hotel design includes rooms designed to 'Accessible' standards with rooms being on all levels of the building and there is 'Accessible' parking spaces laid out closest to the entrance which has a level threshold.

Bicycle parking for 24 cycles is provided adjacent to the front door with secure fixings and weather protection. This area is also overlooked by the restaurant area and bedrooms above.

Summary

The site is an under-utilised coach park which was part of the original Bluewater development, located to the north east of the estate adjacent to Lake 5B and at the foot of the chalk escarpment.

The proposed use for this site is a hotel to support the existing venue centre. The overall site is greater in area than required for the hotel.

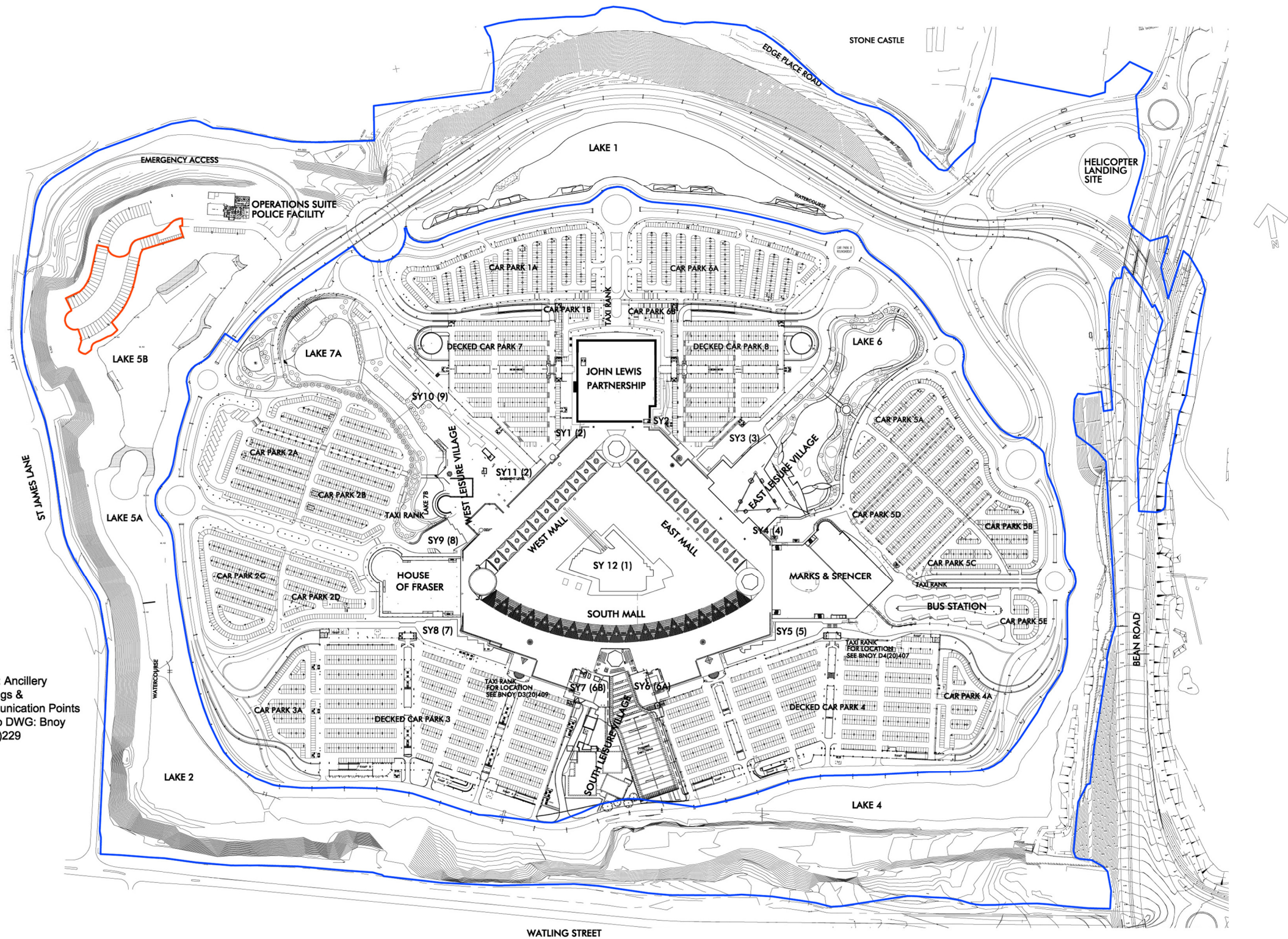
The design seeks to make the minimum impact on the existing site and to be as energy efficient as practicable thereby reducing its carbon footprint through passive design and appropriate selection of energy plant in use.

The hotel footprint is orientated close to a north south axis to reduce solar gain and almost completely on the hard standing of the western part of the existing coach park. Access by vehicles is also contained within the hard standing zone.

The external landscape is sympathetic to the existing habitat and is linked to the existing pedestrian footpath network for ease of access on foot. The building is designed to have easy access for the less able providing 'accessible' parking spaces close to the entrance with level thresholds. Accessible rooms are provided on each floor with integral bathrooms.

The building is designed to achieve BREEAM Excellent as a minimum and incorporates timber frame construction as well as other environmental design considerations.

The building is clad in materials sympathetic and reflective of its location being timber cladding, render and brickwork.





**BLUEWATER, DARTFORD, KENT:
PROPOSED HOTEL DEVELOPMENT.
BREEAM BESPOKE – ECOLOGICAL ASSESSMENT**

December 2011

Field Surveyor:
Katia Bresso

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Head Office: Kent Wildlife Trust, Tyland Barn, Sandling, Maidstone, Kent ME14 3BD

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**BLUEWATER, DARTFORD, KENT.
PROPOSED HOTEL DEVELOPMENT.
BREEAM BESPOKE – ECOLOGICAL ASSESSMENT**

1 INTRODUCTION

Kent Wildlife Trust was contracted by Lend Lease Global Investments plc to conduct a BREEAM ecological assessment of an area of land at Bluewater, Dartford, Kent in connection with construction of a hotel.

The ecological assessment was undertaken to comply with the format of The Building Research Establishment Environmental Assessment Method (BREEAM) Bespoke Scheme 2008.

This report specifically assesses the proposed development against the following BREEAM criteria:

LE3: Ecological value of land and protection of ecological features

LE4: Mitigating ecological impact

LE5: Enhancing site ecology

LE6: Long term impact on biodiversity

The assessment was conducted by Katia Bresso, who meets the requirements of a Suitably Qualified Ecologist under the Code (see Appendix C: Section B1 Suitably Qualified Ecologist's Qualifications for further details).

1.1 Site Location

The site is located at approximately TQ 574 739. The location of the site is shown at Figure 1.

1.2 Survey Objectives

The aim of an ecological scoping survey is to assess the potential of a site to support protected species or important habitats, and to assist in demonstrating compliance with current wildlife legislation and planning policy objectives.

The key objectives of this survey have been to:

- Identify all relevant statutory and non-statutory designated sites and features of ecological significance within the site and its surroundings.
- Assess the potential for the presence of protected species and species of principal conservation importance within the site and its surroundings.
- Provide recommendations for further surveys where assessed as necessary and suggest potential enhancements.
- Present the likely significance of ecological impacts on the proposed development.
- Provide an early indication of potential ecological mitigation and compensation requirements.

A summary of wildlife legislation and policy has been included in Appendix A.

1.3 Limitations

This report records the potential for flora and fauna evident on the day of the site visit. It does not record any flora or fauna that may appear at other times of the year and, as such, were not evident at the time of visit.

The findings of this report represent the professional opinion of a qualified ecologist and do not constitute professional legal advice. The client may wish to seek professional legal interpretation of the relevant wildlife legislation cited in this document.



Figure 1: Bluewater. Map showing location of proposed hotel development (identified by yellow marker)

2 METHODOLOGY

2.1 Desk Study

The web-based resource Kent Landscape Information System was consulted to identify designated nature conservation sites within 1km of the site and habitats of potentially high ecological importance and sensitivity within 500m of the site (e.g. ancient woodlands, ponds).

A data search was carried out with the Kent Reptile and Amphibian Group KRAG¹.

2.2 Scoping Survey

The site and its immediate surroundings were considered in terms of habitats, protected species and species of principal conservation importance during a walkover survey undertaken on 13th September 2011 by Katia Bresso CEnv MIEEM, a qualified professional consultant ecologist with over 10 years of experience, licensed bat surveyor (Licence Number 20110791), licensed dormouse surveyor (Licence Number 20112831) and licensed great crested newt surveyor (Licence Number 20112830). Evidence of the use of the site by species was recorded (i.e. field signs).

The habitat survey was undertaken in general accordance with Phase 1 Habitat Survey (JNCC 2010)², i.e. within the survey area every parcel of land is classified, recorded and mapped in accordance with a list of ninety specified habitat types using standard colour codes to allow rapid visual assessment of the extent and distribution of different habitat types.

All trees were also checked for potential for roosting bats (from the ground only, using binoculars)³.

¹ Please note that absence of records should not be taken as confirmation that a species is absent from the search area.

² http://www.jncc.gov.uk/pdf/pub90_HandbookforPhase1HabitatSurveyA5.pdf

³ Please note that it is possible some bat roosting features may have been missed as the survey was undertaken whilst the trees were in full leaves

3 RESULTS

3.1 Designated Nature Conservation Sites

Darenth Wood, Site of Special Scientific Interest SSSI and ancient woodland⁴ is present within 950m of the site, to the south east.

3.2 Habitats

The proposed development site is located to the North West of Bluewater shopping centre. The footprint of the survey area comprises mainly hard-standing, with a small area of grassland (approximately 200m²) and shrubs. It is surrounded by a lake to its South and East (with associated amenity grassland, footpaths and playground area) and scrubby woodland on the slope of the quarry to its North and West. Some small trees and shrubs were present along its boundary, on the lake side.

Fourteen species were present in the small grassland area, namely: bird's-foot-refoil *Lotus corniculatus*, hop trefoil *Trifolium campestre*, sainfoin *Onobrychis viciifolia*, ribwort plantain *Plantago lanceolata*, yellow oat-grass *Trisetum flavescens*, red clover *Trifolium pratense*, fat-hen *Chenopodium album*, oxeye daisy *Leucanthemum vulgare*, bristly oxtongue *Picris echioides*, hawkweed oxtongue *Picris hieracioides*, pot marjoram *Origanum majorana*, scentless mayweed *Tripleurospermum inodorum*, common nettle *Urtica dioica*, daisy *Bellis perennis*, and yarrow *Achillea millefolium*.

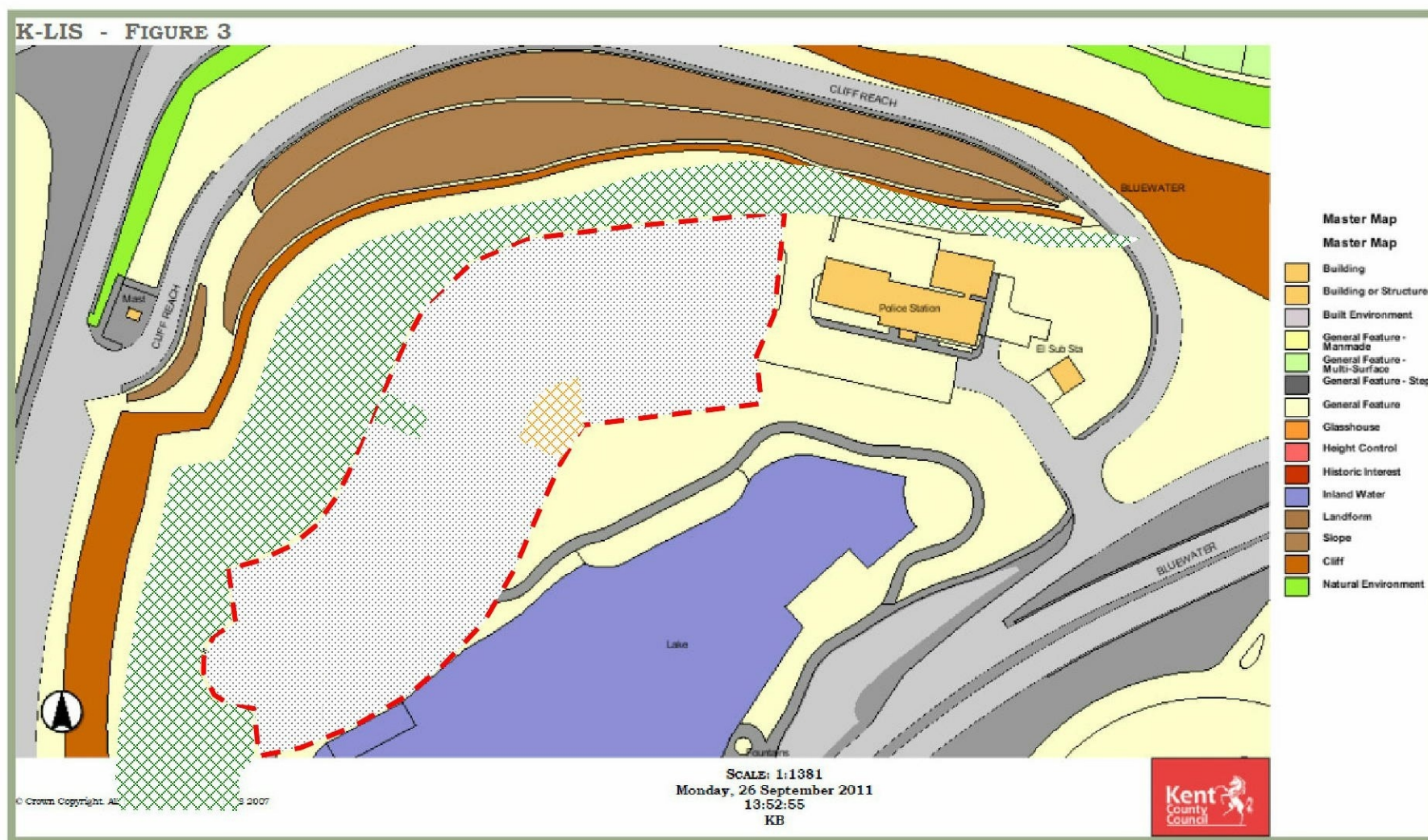
The shrubs present included dogwood *Cornus sanguinea*, rose *Rosa* sp., wayfaring-tree *Viburnum lantana*, wild Privet *Ligustrum vulgare*, and rowan *Sorbus aucuparia*.

Several species were also recorded on the edge of the tarmac to the extreme west of the site, including yarrow, hawkweed Oxtongue, oxeye daisy, red clover, lesser skullcap *Scutellaria minor*, and yellow oat-grass.

The Phase 1 habitat map for the survey area is included within Figure 1overleaf. The key to the map is given below.

	Site boundary
	Unimproved neutral grassland
	Scattered scrub
	Hard-standing

⁴ Land that has had continuous woodland cover since at least 1600 AD



3.3 Amphibians

The survey area provided limited potential terrestrial habitat for amphibians (restricted to the small grassland area).

The data search carried out with Krag (Enquiry No: CES728) revealed that the closest recorded great crested newt *Triturus cristatus* site is located at Beacon Wood Country Park, 2.01 km to the SE (record id: 5557). The presence of great crested newts was considered to be possible.

Common toads *Bufo bufo*, common frog *Rana temporaria* and common newts *Triturus vulgaris* are known to occur within the surrounding lakes (K. Bresso, pers.com.).

Pond 1		
	Data	Field score
SI1 - Location	Optimal	1
SI2 - Pond Area	15000 m ²	0.8
SI3 - Pond Drying	Never	0.9
SI4 - Water Quality	Moderate	0.67
SI5 - Shade	0%	1
SI6 - Fowl	Major	0.01
SI7 - Fish	Minor	0.67
SI8 - Ponds	4 ponds within 1km of survey pond	1
SI9 - Terrestrial Habitat	Moderate	0.67
SI10 - Macrophytes	5% of pond surface	0.35
HSI:	0.49	

The HSI calculation means that suitability of Pond 1 for great crested newts is poor.

Common amphibian species are afforded limited legal protection under the Wildlife & Countryside Act 1981 (as amended). The great crested newt is afforded full legal protection under Schedule 5 of the Wildlife & Countryside Act 1981 (as amended). It is also listed under Schedule 2 of the Conservation of Habitats and Species Regulations 2010 and are therefore a European Protected Species (EPS). Great crested newts and common toads are also listed as species of principal conservation importance (See Appendix A).

For more information, Natural England have produced a Standing Advice Species Sheet available at http://www.naturalengland.org.uk/Images/Newt%20April11_tcm6-21705.pdf

3.4 Reptiles

The survey area provided limited potential terrestrial habitat for reptiles (restricted to the small grassland area). No reptiles were seen during the site visit.

Slow-worms *Anguis fragilis*, grass snakes *Natrix natrix* and common lizards *Zootoca vivipara* are known to be present within the grasslands present on the escarpments of the Bluewater site (K. Bresso, pers.com.).

Common reptiles are afforded limited legal protection under Schedule 5 of the Wildlife & Countryside Act 1981 (as amended). They are also listed as species of principal conservation importance (See Appendix A).

For more information, Natural England have produced a Standing Advice Species Sheet available at http://www.naturalengland.org.uk/Images/Reptile%20feb11_tcm6-21712.pdf

3.5 Birds

The survey area was not considered to have any potential for supporting breeding birds.

All species of bird whilst actively nesting are afforded legal protection under the Wildlife & Countryside Act 1981 (as amended) and special penalties are available for offences related to birds listed on Schedule 1. Some species are also listed as species of principal conservation importance, including sky lark, common cuckoo, house sparrow, tree sparrow and song thrush (See Appendix A).

3.6 Hazel Dormouse

The survey area itself was not considered to have any potential for supporting the hazel dormouse *Muscardinus avellanarius* due to lack of vegetation on site. However it is considered highly likely that dormouse may be present in the scrub and trees surrounding the survey area as there are records of dormouse occurring elsewhere along the Bluewater cliffs and there is good connectivity between these areas.

The dormouse is afforded full legal protection under Schedule 5 of the Wildlife & Countryside Act 1981 (as amended). It is also listed under Schedule 2 of the Conservation of Habitats and Species Regulations 2010 and are therefore a “European Protected Species” EPS). The dormouse is also listed as species of principal conservation importance (See Appendix A).

For more information, Natural England have produced a Standing Advice Species Sheet available at http://www.naturalengland.org.uk/Images/Dormouse%20April11_tcm6-21704.pdf

3.7 Badger

It is considered that the site has no potential to support badgers *Meles meles*. No signs of their presence were found during the site visit.

The Protection of Badgers Act 1992 was introduced in recognition of the additional threats that badgers face from illegal badger digging and baiting. Under the Act, it is an offence inter alia to:

- Wilfully kill, injure or take a badger, or to attempt to do so;
- Cruelly ill-treat a badger; or
- Intentionally or recklessly interfere with a badger sett by (a) damaging a sett or any part of one; (b) destroying a sett; (c) obstructing access to or any entrance of a sett; (d) causing a dog to enter a sett; or (e) disturbing a badger when it is occupying a sett.

The purpose of this legislation is to ensure that badgers are humanely treated (See Appendix A).

For more information, Natural England have produced a Standing Advice Species Sheet available at http://www.naturalengland.org.uk/Images/Badger%20feb11_tcm6-21692.pdf

3.8 Water voles

Water voles *Arvicola terrestris* are known to be present on one of the surrounding lakes (northeastern section of Lake 4, K. Bresso, pers.com). The lake immediately adjacent to the site offered some potential water vole habitat within the reed bed area. The areas of gravel beach and of bare earth did not offer any potential habitat for water voles.

Water voles are afforded legal protection under section 9 of the Wildlife & Countryside Act 1981 (as amended) (See Appendix A).

For more information, Natural England have produced a Standing Advice Species Sheet available at http://www.naturalengland.org.uk/Images/Water%20Voles%20feb11_tcm6-21714.pdf

3.9 Bats

The survey area was considered to have no potential for supporting roosting bats. The habitat present had little potential for foraging bats either. However the surrounding scrub/wood and lakes are highly likely to be used by foraging bats, including the daubenton's bat *Myotis daubentonii*.

All species of bat are afforded full legal protection under Schedule 5 of the Wildlife & Countryside Act 1981 (as amended). They are also listed under Schedule 2 of the Conservation of Habitats and Species Regulations 2010 and are therefore a "European Protected Species" (EPS). Some species of bats (noctule, soprano pipistrelle, brown long-eared bat, barbastelle) are also listed as species of principal conservation importance.

Bats rarely use the same roosting place all year round as they need different conditions for breeding and hibernating. But bats are creatures of habit and tend to return to the same sites at the same time year after year. For this reason, roosts are legally protected even if bats don't seem to be living there at certain times of year.

The legislation makes it a criminal offence to:

- Deliberately capture, injure or kill a bat;
- Intentionally or recklessly disturb a bat in its roost or deliberately disturb a group of bats;
- Damage or destroy a bat roosting place (even if bats are not occupying the roost at the time);
- Possess or advertise/sell/exchange a bat (dead or alive) or any part of a bat;
- Intentionally or recklessly obstruct access to a bat roost.

For more information, Natural England have produced a Standing Advice Species Sheet available at http://www.naturalengland.org.uk/Images/Bat%20feb11_tcm6-21717.pdf

4 BREEAM BESPOKE SCHEME

This report is concerned with the ecological aspects of the BREEAM Bespoke (2008) Scheme Assessment for this site.

In addition to the results of the site visit, the BREEAM Assessment made reference to the following documents provided by the client:

- Arboricultural Impact Assessment Report (Landmark Trees, 2011)
- Proposed Landscape Plan Option G Drawing No C1079 Revision A (Juice Architects, 2011)

There are eight potential ecological credits available as part of this assessment. Further details are provided below:

4.1 LE3: Ecological value of land and protection of ecological features

One credit is awarded if, “...the construction zone is defined as land of low ecological value and all existing features of ecological value will be fully protected from damage during site preparation and construction works.”

The ecological scoping survey determined that the footprint of the proposed development is solely within an area of hard-standing. The construction zone is therefore defined as land of low ecological value.

There is a small area of grassland (approximately 200m²) and shrubs present near the site. The client has confirmed that these habitats will not be directly impacted by the proposals.

The grassland was considered to have potential for supporting slow-worms *Anguis fragilis* and viviparous lizards *Zootoca vivipara*. Because this potential habitat is very small, it is not considered that a specialist reptile survey is justified. However, it is recommended that the following mitigation is adopted as soon as possible in order to minimise the likelihood of causing incidental injury or death to any reptiles during the proposed works:

- The area should be mowed using hand held machinery only⁵ (to 15cm height minimum), during sunny conditions in order to force the animals out of the area;
- A second cut down to ground level, should be carried out two days after the first cut, during sunny conditions.
- The height of vegetation should be kept lower than 5cm until work commences.

As there is plenty of reptile habitat in the surrounding areas, it is not judged necessary to compensate like for like for loss of reptile habitat.

In addition, the grassland and shrubs should be protected by barriers to prevent any incursions during the construction works.

⁵ strimmer, brush-cutter

The client has confirmed that contractors have been appointed to manage the grassland area in line with the above specification.

Given the above information, it is considered that **one credit may be awarded** under LE3 – Ecological value of site and protection of ecological features.

4.2 LE4: Mitigating ecological impact

Two credits are available for minimising the impact of a building development on the existing site ecology.

BREEAM calculates the change in ecological value by comparing the diversity (number and area) of plant species on the site pre and post construction.

One credit is awarded where evidence provided demonstrates that the change in the site's existing ecological value, as a result of development, is *minimal* i.e. where the change in ecological value is less than zero and equal to or greater than minus nine plant species.

Two credits may be awarded where the change in ecological value of the site is equal to or greater than zero plant species i.e. no negative change.

The tables below show the habitat areas for the site before and after development and the associated species/hectare value.

Before Development:

Habitat Type	Area of habitat (m ²)	Number of species per habitat type
Hard-standing / buildings	4,220	0

After Development:

Habitat Type	Area of habitat (m ²)	Number of species per habitat type
Hard-standing / buildings	3,840	0
Landscaping (new trees/hedge within parking areas: birch, maple)	180	2
Landscaping (new tree screen with mixed broadleaves to match woodland W1)	200	6

The calculation for the change in the ecological value of the site was carried out using the formula given in the BREEAM guidance:

a) Calculation of ecological value before development:

$$4220 \times 0 / 4220 = 0$$

b) Calculation of ecological value after development:

$$((3840 \times 0) + (180 \times 2) + (200 \times 6)) / 4220 = 0.37$$

c) Change in ecological value ($c = b - a$):

$$0.37 - 0 = 0.37$$

The overall species change is 0.37 which is classified as 'no negative change'. **Two credits may therefore be awarded** under LE4: Mitigating Ecological Impacts.

4.3 LE5: Enhancing site ecology

A total of three credits are available in order to, "*recognise and encourage actions taken to maintain and enhance the ecological value of the site as a result of development.*"

One credit will be awarded where the design team (or client) has appointed a Suitably Qualified Ecologist to advise and report on enhancing and protecting the ecological value of the site; and implemented the professional's recommendations for general enhancement and protection for site ecology.

Once the first credit has been achieved, then a further two credits are available as follows:

One credit will be awarded where there is a positive increase in the ecological value of the site of up to (but not including) six species.

Two credits will be awarded where there is a positive increase in the ecological value of the site of six species or greater.

This report confirms that the client has appointed a suitably qualified ecologist (see Ecology Template - Appendix C) and that a detailed report with recommendations for maintaining and protecting the ecological value of the site has been produced (Kent Wildlife Trust, 2011).

Particular recommendations have been made to ensure that the lighting scheme should take into account the need for darkness of bats and hazel dormouse which were considered likely to be present in the surrounding habitats:

Lighting can be detrimental to roosting, foraging and commuting bats⁶. The following recommendations (derived from the Bat Conservation Trust) should be considered (where applicable), when designing any external lighting scheme for the proposed development:

1. Low-pressure sodium lamps or high-pressure sodium must be used instead of mercury OR metal halide lamps where glass glazing is preferred due to its UV filtration characteristics.
2. Lighting must be directed to where it is needed and light spillage avoided. Hoods must be used on each light to direct the light and reduce spillage.

⁶ http://www.bats.org.uk/pages/bats_and_lighting.html and <http://www.batsandlighting.co.uk/index.html> for more information

3. The times during which the lighting is on must be limited to provide some dark periods. If the light is fitted with a timer this must be adjusted to the minimum to reduce the amount of 'lit time'.
4. Lamps of greater than 2000 lumens (150 W) must not be used.
5. Movement sensors must be used. They must be well installed and well aimed to reduce the amount of time a light is on each night.
6. The light must be aimed to illuminate only the immediate area required by using as sharp a downward angle as possible. This lit area must avoid being directed at, or close to, any bats' roost access points or flight paths from the roost. A shield or hood can be used to control or restrict the area to be lit. Avoid illuminating at a wider angle as this will be more disturbing to foraging and commuting bats as well as people and other wildlife.
7. The lights on any upper levels must be directed downwards to avoid light spill and ecological impact.
8. The lighting must not illuminate any bat bricks and boxes placed on the buildings or the trees in the grounds.
9. The specifications could include an intelligent lighting system with directional, interactive dimming Light Emitting Diodes (LEDs, that emit minimal ultra-violet light), in order to minimise waste of light and provide light only when and where needed (such as LumiMotion used along part of the River Thames for the Thames Landscape Strategy⁷).

Light spill from internal lighting (in the hotel rooms) should also be considered and restricted: hoods, cowls, louvers and/or shields may be utilised to further direct any lighting away from the potential dormouse habitat. It is also important to consider the potential effects of light reflecting from windows or any other reflective surfaces onto the potential dormouse habitat.

A lighting plan could be produced to include measures to monitor lux levels. This scheme should address the construction phase, any phasing of the development and the operational phase and include remedial action to be undertaken where problems are identified by the monitoring scheme.

Appropriate enhancements for the site could include:

- Provision of ready-made bird (sparrow terrace timber boxes or house martins nests for instance)⁸ / bat boxes (examples can be found in: Williams, C (2010). *Biodiversity for Low and Zero Carbon Buildings: A Technical Guide for New Build*. RIBA or ready-made bat boxes can be used, such as EcoSurv Bat Box or Schwegler Bat tube⁹)¹⁰.
- Provision of rock piles for invertebrates, reptiles and amphibians (as stand alone or within new walls by creating recesses into any new wall structures).
- Establish climbing plants on walls and other vertical structures.
- Establish wildflower plug/bulb planting in amenity grassland.

⁷ <http://thames-landscape-strategy.org.uk/news/255/warren-footpath-lighting-consultation> for more information

⁸ In order not to damage trees, free-hanging nesting boxes can be hung from a loop or hook over a branch. This method avoids the use of nails. It is also helpful to avoid predation.

⁹ Example of a provider for bat boxes: http://www.alanaecology.com/acatalog/Bat_Boxes.html

¹⁰ It is highly recommended to install bird boxes near bat boxes to avoid birds from using the bat boxes to the detriment to bats.

- Integration of Sustainable Urban Drainage Systems (SUDS)¹¹.
- Integration of green or grey roofs¹².

Providing that the client / design team is able to confirm that the recommendations will be implemented then one credit may be awarded. In addition, a further credit may be awarded as there will be a positive increase in the ecological value of the site of up to six species (actual change = 0.37; see calculation under LE4).

Providing that the client / design team is able to confirm that the recommendations will be implemented then **two credits may be awarded** for LE5: Enhancing site ecology.

4.4 LE6: Long term impact on biodiversity

Two credits are available to minimise the long-term impact of the development on the site, and surrounding area's biodiversity.

One credit is awarded where the client has committed to achieving the mandatory requirements listed below and at least two of the additional requirements. Two credits are awarded where the client has committed to achieving the mandatory requirements and at least four of the additional requirements.

The table below shows the mandatory and additional requirements of LE6.

Mandatory Requirements
1. A suitably qualified ecologist has been appointed prior to commencement of activities on site. 2. The suitably qualified ecologist confirms that all relevant UK and EU legislation relating to protection and enhancement of ecology has been complied with during the design and construction process. 3. A landscape and habitat management plan, appropriate to the site, is produced covering at least the first five years after project completion. This is to be handed over to the building occupants and includes: • Management of any protected features on site • Management of any new, existing or enhanced habitats • A reference to the current or future site level or local Biodiversity Action Plan.
Additional Requirements
1. The contractor nominates a 'Biodiversity Champion' with the authority to influence site activities and ensure that detrimental impacts on site biodiversity are minimised in line with the recommendations of a suitably qualified ecologist. 2. The contractor trains the site workforce on how to protect site ecology during the project. Specific training should be carried out for all the site workforce to ensure they are aware of how to avoid damaging site ecology. Training should be based on the findings and recommendations for protection of ecological features highlighted within a report prepared by a suitably qualified ecologist. 3. The contractor records actions taken to protect biodiversity and monitor their effectiveness throughout key stages of construction. The requirement commits the contractor to make such records available where publicly requested. 4. Where a new ecologically valuable habitat, appropriate to the local area, is created. This includes habitat that supports nationally, regionally or locally important biodiversity, and/or which is nationally, regionally or locally important itself; including any habitat listed in the UK Biodiversity Action Plan (UK BAP), Local Biodiversity Action Plan (LBAP), those protected within statutory sites (e.g. SSSIs), or those within non-statutory sites identified in local plans. 5. Where flora and/or fauna habitats exist on site, the contractor programmes site works to minimise disturbance to wildlife. For example, site preparation, ground works, and landscaping have been, or will be,

¹¹ <http://www.ciria.org.uk/suds/index.html> for more information

¹² <http://www.environment-agency.gov.uk/business/sectors/91967.aspx> for more information

scheduled at an appropriate time of year to minimise disturbance to wildlife. Timing of works may have a significant impact on, for example, breeding birds, flowering plants, seed germination, amphibians etc. Actions such as phased clearance of vegetation may help to mitigate ecological impacts. This additional requirement will be achieved where a clear plan has been produced detailing how activities will be timed to avoid any impact on site biodiversity in line with the recommendations of a suitably qualified ecologist.

In terms of the mandatory requirements, this report confirms that a suitably qualified ecologist was appointed prior to commencement of works on site. The site was considered to be of low ecological value and the footprint of the development is unlikely to have a direct negative impact on any habitats or species of nature conservation importance. There is a small area of grassland within the wider survey area which was considered to have potential for supporting two reptile species (slow-worms and viviparous lizards) both of which receive limited protection (killing and injury) under the Wildlife and Countryside Act, 1981. Advice has been given (see LE3) concerning mitigation to minimise the likelihood of causing incidental injury or death to any reptiles during the proposed work and the client has confirmed in writing that contractors have been appointed to manage the grassland area in line with the recommendations.

In order to fulfil the mandatory requirements the client will need to produce a management plan for existing and proposed features of wildlife interest at the site.

Options with regards to achieving the additional requirements are provided below:

1. Appointment of a Biodiversity Champion

The Biodiversity Champion should be nominated by the contractor. In this instance the site manager may be an appropriate person to act as the Biodiversity Champion.

The Biodiversity Champion should have the authority to influence site activities and ensure that detrimental impacts on site biodiversity are minimised in line with the recommendations provided within this report and within the ecological scoping survey undertaken in October 2011.

The site itself is considered to be of low ecological value and it is considered unlikely that the development will have a negative impact on any habitats or species of wildlife interest. However, areas of high ecological value are present around the site.

In addition to adopting the recommendations made within LE3 and LE5, depending on the extent of any associated works, it may also be necessary to adopt the recommendations given within the ecological scoping survey report (Kent Wildlife Trust, 2011):

- In order to reduce any risk of pollution incidents such as spillage of oil, diesel, detergents, cement, etc., or an increase in sedimentation from disturbance to the river bed or banks, all work in the vicinity of the watercourse on the site should follow recommendations given in the Environment Agency Pollution Prevention Guidelines¹³.
- Should any works proposed be likely to impact the reed bed area of the lake, then a water vole survey should be carried out before hand (between mid-April to mid-September) to assess any potential impact onto the species and provide recommendations to lessen such impact.

¹³ Can be found here: <http://www.environment-agency.gov.uk/business/topics/pollution/39083.aspx>

2. Training the site workforce on how to protect site ecology during the project

This should be undertaken by the contractor and should include a site induction / toolbox talks with particular emphasis on reptiles and protection of the grassland area. Depending on the extent of any associated work, the talks may also need to include protection of waterbodies on site as outlined above ('Appointment of Biodiversity Champion').

3. The contractor records actions taken to protect biodiversity and monitor their effectiveness throughout key stages of construction

Issues relating to biodiversity should be a standing item for all progress meetings relating to this project.

4. Creation of new ecologically valuable habitat appropriate to the local area

The landscaping plan does not include creation of new ecologically valuable habitat.

This report has made recommendations for enhancements (see LE5 for details) which, if implemented, have potential to encourage use of the site by UK and Kent Biodiversity Action Plan species such as slow-worms, viviparous lizard, pipistrelle bats and house sparrow.

5. Programming of site work to minimise disturbance to wildlife

The footprint of the development does not support any habitats or species of nature conservation importance. There is no requirement to programme site work to minimise disturbance to wildlife.

If the client is able to submit evidence showing that all three mandatory requirements and two additional requirements have been met then it is recommended that one credit may be awarded. If the client is able to submit evidence showing that all three mandatory requirements and four additional requirements have been met then it is recommended that two credits may be awarded.

5 SUMMARY OF POTENTIAL ECOLOGICAL CREDITS

A Suitably Qualified Ecologist has visited the site and has assessed the proposals against the ecological requirements of a BREEAM Bespoke scheme (2008). Based on the results of the site visit and the BREEAM assessment it is recommended that, given existing information, a total of **three credits may be awarded. Three – four additional credits may be available** if the client is able to provide additional information. A summary is given below:

5.1 LE3: Ecological value of land and protection of ecological features

The land within the construction zone is considered to be of low ecological value. The client has also confirmed that habitat within the wider footprint, which is considered to be suitable for protected species (reptiles) will be protected and managed to minimise the likelihood of causing incidental injury or death to any reptiles.

It is recommended that, on the basis of existing data, one credit may be awarded.

5.2 LE4: Mitigating ecological impact

Evidence from the site visit and the landscaping proposals submitted by the client (Juice Architects, 2011) indicated that the proposals will have a positive ecological change with an increase of 0.37 species.

It is recommended that, on the basis of existing data, two credits may be awarded.

5.3 LE5: Enhancing site ecology

The client has appointed a Suitably Qualified Ecologist to advise and report on enhancing and protecting the ecological value of the site. The proposals will also lead to a positive ecological value of the site by 0.37 species.

If the client is able to confirm that the site enhancements recommended by the Suitably Qualified Ecologist will be implemented then it is recommended that two credits may be awarded.

5.4 LE6: Long term impact on biodiversity

If the client is able to submit evidence showing that all three mandatory requirements and two additional requirements have been met then it is recommended that one credit may be awarded. If the client is able to submit evidence showing that all three mandatory requirements and four additional requirements have been met then it is recommended that two credits may be awarded.

6 REFERENCES AND BIBLIOGRAPHY

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- Natural England (2011). *Reptile mitigation guidelines - Technical Information Note TIN102*

Websites Visited:

- <http://www.kent.gov.uk/klis> visited on 26/09/2011

Appendix A – Wildlife Legislation & Policy

The following is a summary of wildlife legislation and planning policy which affords protection to plants and animals and seeks to conserve, enhance and restore biodiversity. This section is provided for general guidance only. While every effort has been made to ensure accuracy, this section should not be relied upon as a definitive statement of the law.

For further information, please see:

<http://www.naturalengland.org.uk/ourwork/planningtransportlocalgov/spatialplanning/standingadvice/legislation.aspx>

Commonly encountered protected species

Many species of plants, invertebrates and animals receive protection under the legislation detailed above. However, of these, the following are the most likely to be affected by development in the southeast:

Species	Legislation
Bats (all species) Dormice Great crested newts Otters Sand lizards and smooth snakes	The Wildlife and Countryside Act 1981 (as amended) & The Conservation of Habitats and Species Regulations 2010. These make it an offence to: - Deliberately or recklessly capture, injure or kill any wild animal of a European protected species - Deliberately or recklessly disturb wild animals of any such species - Damage or destroy their breeding site or resting place - Keep, transport, sell or exchange, or offer for sale or exchange, any live or dead animal, or any part of, or anything derived from these species. Disturbance of animals includes in particular any disturbance which is likely - to impair their ability: -to survive, to breed or reproduce, or to rear or nurture their young, or -in the case of animals of a hibernating or migratory species, to hibernate or migrate; - to affect significantly the local distribution or abundance of the species to which they belong.
Breeding birds (in particular barn owls)	The Wildlife and Countryside Act 1981 (as amended). This makes it illegal to intentionally kill, injure or take any wild bird and to take, damage or destroy the nest (whilst being built or in use) or eggs.

Species	Legislation
Adders, grass snakes, common lizards and slow worms	The Wildlife and Countryside Act 1981 (as amended) (intentional killing and injuring only). This makes it illegal to kill or injure these animals.
Water voles	The Wildlife and Countryside Act 1981 (as amended). This makes it illegal to intentionally damage, destroy or obstruct access to any structure or place which water voles use for shelter or protection; it is also an offence to intentionally disturb water voles while they are using these places.
White clawed crayfish	The Wildlife and Countryside Act 1981 (as amended). This makes it an offence to: - intentionally, or recklessly, kill or injure any of the above species, and/or; - sell, or attempt to sell, any part of the species, alive or dead. Advertises that he buys or sells, or intends to buy or sell.
Badgers	The Protection of Badgers Act 1992. This makes it an offence to: - Willfully killing, injures or takes, or attempts to kill, injure or take, a badger. - Cruelly ill-treating a badger, digging for badgers, using badger tongs, using a firearm other than the type specified under the exceptions within the Act. - Interfering with a badger sett by damaging, destroying, obstructing, causing dog a dog to enter a sett, disturbing an occupied sett - either by intent or by negligence. - Selling or offering for sale a live badger, having possession or control of a live badger. - Marking a badger or attaching any ring, tag, or other marking device to a badger.

The Wildlife and Countryside Act 1981 (as amended)

The Wildlife and Countryside Act 1981 (as amended) implements the Birds Directive (1979) and the Berne Convention (1979) into national legislation. The Wildlife and Countryside Act 1981 (as amended) includes a number of Schedules which are reviewed (usually every five years) on which details of the protected species, and their level of protection, are detailed. A detailed summary of the sections of the Wildlife and Countryside Act, along with the protection afforded under them can be found within Paragraphs 118-122 of ODPM Circular 06/2005 (Circular06/2005)

Full details of the legislation can be found at www.jncc.gov.uk/page-3614 and details of the species listed on the Schedules can be found at:

- Birds www.jncc.gov.uk/PDF/waca1981_schedule1.pdf
- Animals www.jncc.gov.uk/page-1815
- Plants www.jncc.gov.uk/page-1816

There are no licensing functions within the Wildlife and Countryside Act for development activities which may affect a species protected under The Wildlife and Countryside Act 1981 (as amended) and works need to proceed following good practice and if appropriate rely on the ‘incidental result of an otherwise lawful operation defence’. However, with regards to the water vole, where translocation of animals is proposed, Natural England does not feel this could be considered the incidental result of other activities and so would not be covered by the defence in the legislation. If there is no alternative to translocation, Natural England may be able to issue a licence to trap and translocate the water voles for the purpose of conservation.

The Countryside and Rights of Way Act 2000

The Wildlife and Countryside Act 1981 was amended by the Countryside and Rights of Way Act (CRoW Act) in 2000. The CRoW Act strengthened the protection afforded to species listed within the Schedules of the Wildlife and Countryside Act by adding ‘reckless’ to several of the offences and increased the penalties for wildlife offences.

In addition, Section 74 of the CRoW Act introduced a new duty on Government Ministers and Department to further the conservation of biodiversity for habitats and species of principal importance. This was superseded by Sections 40 and 41 of the Natural Environment and Rural Communities (NERC) Act of 2006. Section 40 provides that every public authority must, in exercising its functions, have regard to the purpose of conserving biodiversity. Details of the lists of habitats and species provided for at Section 41 of the NERC act can be found at www.ukbap-reporting.org.uk/news/details.asp?X=45. Planning Policy Statement 9: Biodiversity and Geological Conservation (PPS9) and the accompanying ODPM Circular 06/2005 ([Circular06/2005](#)) place a clear responsibility on Local Planning Authorities to further the conservation of habitats and species of principal importance where a planning proposal may adversely affect them.

Full details of the legislation contained within the Countryside and Rights of Way Act can be found at www.opsi.gov.uk/acts/acts2000/ukpga_20000037_en_1.

The Protection of Badgers Act 1992

The legislation affording protection to badgers is primarily concerned with animal welfare and the need to protect badgers from activities such as baiting and deliberate harm. The Protection of Badgers Act 1992 makes it an offence to:

- Wilfully kill, injure, take, possess or cruelly ill-treat a badger, or attempt to do so;
- To intentionally or recklessly interfere with a sett (this includes disturbing badgers whilst they are occupying a sett, as well as damaging or destroying a sett or obstructing access to it).

As with The Wildlife and Countryside Act 1981 (as amended), there are several defences to prosecution in the legislation and the text should be consulted for details of these. Penalties for offences include fines up to £5,000, plus up to six months imprisonment for each illegal sett interference, or badger death or injury.

Full Details of the legislation can be found at
www.opsi.gov.uk/ACTS/acts1992/ukpga_19920051_en_1.

Conservation of Habitats and Species Regulations 2010 (SI 2010/490) came into force (the "2010 Regulations").

From 1st April 2010, these are now the principal means by which the Habitats Directive is transposed in England and Wales. This updates and consolidates all the amendments to the Regulations since they were first made in 1994.

The 2010 Regulations implement the European Habitats Directive into national legislation. Details of those species (often referred to as European protected species or EPS) which receive protection under these regulations can be found in Schedule 2 of the 2010 Regulations.

Full details of the legislation can be found at
http://www.opsi.gov.uk/si/si2010/uksi_20100490_en_1

The Regulations state that:

Part 3 - 41.—

(1) A person who:

- (a) deliberately captures, injures or kills any wild animal of a European protected species,
- (b) deliberately disturbs wild animals of any such species,
- (c) deliberately takes or destroys the eggs of such an animal, or
- (d) damages or destroys a breeding site or resting place of such an animal,

is guilty of an offence.

(2) For the purposes of paragraph (1)(b), disturbance of animals includes in particular any disturbance which is likely:

(a) to impair their ability:

- (i) to survive, to breed or reproduce, or to rear or nurture their young, or
- (ii) in the case of animals of a hibernating or migratory species, to hibernate or migrate;

Or

(b) to affect significantly the local distribution or abundance of the species to which they belong.

(3) It is an offence for any person:

- (a) to be in possession of, or to control,
- (b) to transport,
- (c) to sell or exchange, or
- (d) to offer for sale or exchange, anything to which this paragraph applies.

(4) Paragraph (3) applies to—

- (a) any live or dead animal or part of an animal—
 - (i) which has been taken from the wild, and

- (ii) which is of a species or subspecies listed in Annex IV(a) to the Habitats Directive; and
 - (b) anything derived from such an animal or any part of such an animal.
- (5) Paragraphs (1) and (3) apply regardless of the stage of the life of the animal in question.
- (6) Unless the contrary is shown, in any proceedings for an offence under paragraph (1) the animal in question is presumed to have been a wild animal.
- (7) In any proceedings for an offence under paragraph (3), where it is alleged that an animal or a part of an animal was taken from the wild, it is presumed, unless the contrary is shown, that that animal or part of an animal was taken from the wild.
- (8) A person guilty of an offence under this regulation is liable on summary conviction to imprisonment for a term not exceeding six months or to a fine not exceeding level 5 on the standard scale, or to both.
- (9) Guidance as to the application of the offences in paragraph (1)(b) or (d) in relation to particular species of animals or particular activities may be published by—
- (a) the appropriate authority; or
 - (b) the appropriate nature conservation body, with the approval of the appropriate authority.
- (10) In proceedings for an offence under paragraph (1)(b) or (d), a court must take into account any relevant guidance published under paragraph (9).
- (11) In deciding upon the sentence for a person convicted of an offence under paragraph (1)(d), the court must in particular have regard to whether that person could reasonably have avoided the damage to or destruction of the breeding site or resting place concerned.
-

Licences may be obtained to permit activities that would otherwise be unlawful, but they can only be granted for certain purposes. Those purposes include that of preserving public health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment (Regulation 42(10)). It is the imperative reasons of overriding public interest element of this that is relied upon by those seeking to carry out development where those activities affect a European protected species or their places used for shelter or protection. Even where that purpose is met, however a licence may only be granted where:

- There is “no satisfactory alternative”; and
- The action authorised “will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range”

Natural England issues licences for this purposes under Regulation 44(2)(e).

It is not the responsibility of Natural England staff to decide when a licence is required/recommended. This decision is down to the proposer of the operation who should consider whether, on balance and usually with the assistance of an ecological consultant, the operation would be reasonably likely to result in the commission of an offence under these Regulations. This view should be formed in the light of survey information and specialist knowledge. A licence simply

permits an action that is otherwise unlawful. A licence should be applied for if, on the basis of survey information and specialist knowledge, it is considered that the proposed activity is reasonably likely to result in an offence (killing, breeding site destruction, etc – see above).

It should be noted that the protection afforded to species under the UK and EU legislation referred to here is in addition to that provided by the planning system and the applicant must ensure that any activity they undertake on the application site (regardless of whether or not planning permission has been obtained) complies with the appropriate wildlife legislation. Failure to do so may result in fines and, potentially, a custodial sentence.

Biodiversity Action Plans

Biodiversity Action Plans (BAPS) set out actions for the conservation and enhancement of biological diversity at various spatial scales. They consist of both Habitat Action Plans (HAPs) and Species Action Plans (SAPs).

The UK BAP was the UK's response to the 1992 Convention on Biological Diversity in Rio de Janeiro. Following a review in 2007 a list of 1149 priority species and 65 priority habitats has been adopted, which are given a statutory basis for planning consideration under Section 40 of the NERC Act 2006.

Further information about Kent BAP can be found here: <http://www.kentbap.org.uk/habitats-and-species/priority-species/>

Red Data Books

British Red Data Books (RDB) are an additional method for classifying the rarity of species, and are often seen as a natural progression from Biodiversity Action Plans.

RDB species have no automatic legal protection (unless they are protected under any of the legislation previously mentioned). Instead they provide a means of assessing rarity and highlight areas where resources may be targeted. Various categories of RDB species are recorded, based on the IUCN criteria and the UK national criteria based on presence within certain numbers of 10x10km grid-squares (see <http://www.jncc.gov.uk/page-3425>). As with Biodiversity Action Plans, where possible, steps should be taken to conserve RDB species which are to be affected by development.

Appendix B – Plates





Grassland area



Shrub area



Lake with gravel beach and reedbed at back

Appendix 3: BREEAM Bespoke (2008). Completed Ecology Template

Section A: Contact Details

Ecologist's Details

Company name: [Kent Wildlife Trust](#)

Company address: [Tyland Barn, Maidstone, Kent, ME14 3BD](#)

Contact name: [REDACTED]

Contact telephone number: [REDACTED]

Ecology Report Reference: [Coach Park, Bluewater, Dartford, Kent - Preliminary Ecological Appraisal. Kent Wildlife Trust \(September 2011\)](#)

Developer / Client Details

Company name:

Company address:

Contact name:

Contact telephone number:

Section A2: Development Details

BRE Reference Number:

Client Reference Number:

Development Name: [Coach Park](#)

Development Address: [Bluewater shopping centre, Dartford, TQ574739, Kent.](#)

Section B1: Suitably Qualified Ecologist's Qualifications

Do you hold a degree (or equivalent qualification, e.g. N/SVQ level 5) in ecology or related subject?

Yes ☒

No ☐

If Yes, please provide details

- 1999: MSc equivalent: Rural Space and Environment/ Populations and Ecosystems Biology, Burgundy University, Dijon, France
- 1997: BSc equivalent: Organisms Biology: Organisms and Habitats, University of Tours, France

Are you a practising ecologist with a minimum of 3 years relevant experience within the last 5 years?

Relevant experience must clearly demonstrate a practical understanding of factors affecting ecology in relation to construction and the built environment and will include acting in an advisory capacity to provide recommendations for ecological protection, enhancement and mitigation measures, e.g. ecological impact assessments.

Yes ☒

No ☐

If Yes, please provide details:

Experience record

April 2009 to date - Principal Ecologist with KB Ecology Ltd - sub contractor for Kent Wildlife Trust
Self-employed work undertaking Ecological Site Assessment, Ecological Survey, Protected Species Survey, Mitigation Design and On-Site Supervision.

June 2003 – March 2009 - Principal Ecologist with Jacobs Engineering UK Ltd (previously Babbie Ltd)

Supervision & direction of advanced mitigation contracts for protected species including dormice, bats, badgers, water voles, reptiles and amphibians on major development schemes (road, housing, pipeline, schools). Preliminary scoping studies and protected species surveys. Contract management and mitigation design. Input and writing of Environment Impact Statements. Writing and preparation of tender documents, client development and project management.

Nov 2000 – May 2003 - Ecologist with Atkins Consultants Ltd

Input and writing of Environment Impact Statements. Writing and preparation of tender documents for the Highway Agency. Responsible for undertaking ecological surveys and assessments for a range of projects, in particular road construction and maintenance programmes and flood defence works: identification of areas of ecological interest and provision of advice on the mitigation/management techniques necessary to maintain or improve the nature conservation interest of the project areas. Advice on the status of protected species on site and legal requirements for dealing with these species in relation to the proposed project.

Are you bound by a professional code of conduct and subject to peer review*?

A full member of one of the following organisations will be deemed suitable: Chartered Institution of Water and Environmental Management (CIWEM); Institute of Ecology and Environmental Management (IEEM); Institute of Environmental Management and Assessment (IEMA); Landscape Institute (LI).

Yes ☒

No ☐

If Yes, please provide details : full member of the Institute of Ecology and Environmental Management (IEEM) and a chartered member of the Society for the Environment (SocEnv).

**Peer review is defined as the process employed by a professional body to demonstrate that potential or current full members maintain a standard of knowledge and experience required to ensure compliance with a code of conduct and professional ethics.*

Note: If the answer to any question in Section B1 is 'No' then the ecologist writing the report does

not meet the requirements of a *Suitably Qualified Ecologist* under the Code. The ecology report therefore cannot be used in the Code assessment unless it is verified by a 'Suitably Qualified Ecologist'. If this is the case, proceed to Section B2.

If the ecologist does meet the requirements of a *Suitably Qualified Ecologist*, proceed to Section C.

Section B2: Report Verification

If the appointed ecologist does not meet the requirements of a *Suitably Qualified Ecologist*, the report must be verified by an individual who does meet these requirements. Otherwise the ecology report cannot be used in the Code assessment.

1. The person who verifies the report must provide written confirmation that they meet the requirements of a *Suitably Qualified Ecologist* in accordance with Section B1 above.
2. Details on verifying an ecology report for a Code assessment:
 - The individual verifying the report must provide written confirmation that they comply with the definition of a *Suitably Qualified Ecologist* (as detailed above in Section B1).
 - The individual verifying the report must confirm in writing they have read and reviewed the report and found it to:
 - represent sound industry practice
 - report and recommend correctly, truthfully, and objectively
 - be appropriate given the local site conditions and scope of works proposed
 - avoid invalid, biased, and exaggerated statements.

Written confirmation from the third party verifier on all the points detailed under 1 and 2 above (for Section B2) must be included in the Appendix to this report (see Section E).

Section C: Site Survey

Have the findings of the ecology report been based on data collected from a site survey(s)?

Yes ☒

No ☐

If yes, please provide details to confirm this (e.g. date(s) and scope of site survey(s))

The site and its immediate surroundings were considered in terms of habitats, protected species and species of principal conservation importance during a walkover survey undertaken on 13th September 2011.

If 'No' has been answered to Question 1 of Section C the ecology report cannot be used to determine compliance with the requirements of the relevant Code credits.

Note to Suitably Qualified Ecologist and the Code assessor: The contents of the ecology report must be representative of the site's existing ecology immediately prior to the commencement of initial site preparation works.

Section D: Site Survey Details**LE3 Ecological value of land and protection of ecological features**

1. Is the construction zone of low or insignificant ecological value?

The construction zone includes any land used for buildings, hard standing, landscaping, site access and any other land where construction work is carried out (or land being disturbed in any way), plus a 3 metre boundary in either direction around these areas. It also includes any areas used for temporary site storage and buildings.

Yes ☒ No ☐

If yes, please provide a brief statement explaining how it has been deemed to be of low ecological value:

The footprint of the project is solely upon hard-standing.

2. Are there any features / areas of ecological value that fall within the site, but outside the construction zone?

If you have deemed this area to be of low ecological value then there will be no features of ecological value to protect. However, if there is a feature(s) or area(s) of low ecological value you

wish to advise be retained and enhanced, e.g. a species-poor hedgerow to a species-rich hedgerow, then full details of the protection and enhancement advice should be entered under LE5 Enhancing site ecology.

Yes ☒ No ☐

If yes, please provide a brief statement outlining the advice / recommendations given for protecting all existing features and areas of ecological value:

There is a small area of grassland (approximately 200m²) and shrubs present near the site which will be left untouched by the works. Such areas are to be protected by barriers to prohibit construction works.

LE4 Mitigating ecological impact

3. Are you able to provide the following information for before and after construction:
- habitat types
 - an estimate of the number of floral species present per habitat type (based on appropriate censusing techniques and confirmed planting regimes)?

Yes ☒ No ☐

- a. If yes, a brief description of the landscape and habitats surrounding the development site

The footprint of the project is surrounded by a lake to its South and East (with amenity grassland around it, footpaths and playground area to its north) and scrubby woodland on the slope of the quarry to its North and West. Some small trees and shrubs were present along its boundary, on the lake side.

- b. The total site area (*this will be the same both before and after development*): 4,220m²

- c. Provide details of the site before development in the table below:

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Habitat Type*	Area of habitat type (m2)	Number of species per habitat type
Hard standing/buildings	4,220	0

d. Provide details of the site after development in the table below:

Habitat Type*	Area of habitat type (m2)	Number of species per habitat type
Hard standing/buildings	3,840	0
Landscaping (new trees/hedge within parking areas: birch, maple)	180	2
Landscaping (new tree screen with mixed broadleaves to match woodland W1)	200	6

* Habitat types will include natural areas, e.g. various grasslands and woodlands; as well as areas of the built environment, e.g. buildings, hard landscaping. The area of each habitat type when added together must always equal the total area of the development site.

1 Note to assessor (and ecologist where requested to carry out calculations); the information contained in tables c. and d. above can be used to calculate both LE4 Mitigating ecological impact and LE5 Enhancing site ecology issues.

4. Has your client / developer requested you to carry out the calculation for Eco 4 Change in Ecological Value of Site? The calculation must be carried out in line with the methodology provided in the most current version of the Code Guidance.

Yes ☒ No ☐

If yes, please provide all stages of calculations and state what the total change in ecological value is:

a. Calculation of ecological value before development:

$$4220 \times 0 / 4220 = 0$$

b. Calculation of ecological value after development:

$$((3840 \times 0) + (180 \times 2) + (200 \times 6)) / 4220 = 0.37$$

c. Change in ecological value (c = b – a):

$$0.37 - 0 = 0.37$$

LE5 Enhancing site ecology

5. Has the developer / client required you to provide advice and recommendations for enhancing site ecology?

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Note: these are to include, and go beyond, compliance criteria for all current EU and UK legislation relating to protected species and habitats.

Yes ☒ No ☐

If yes, please provide a brief statement outlining the advice / recommendations given on enhancing and protecting the ecological value of the site:

The lighting scheme should take into consideration the need for darkness of bats and dormice present in the surrounding habitats.

Proposed enhancements for the site could include:

- Provision of ready-made bird (sparrow terrace timber boxes or house martins nests for instance) / bat boxes (examples can be found in: Williams, C (2010). Biodiversity for Low and Zero Carbon Buildings: A Technical Guide for New Build. RIBA or ready-made bat boxes can be used, such as EcoSurv Bat Box or Schwegler Bat tube).
- Provision of rock piles for invertebrates, reptiles and amphibians (as stand alone or within new walls by creating recesses into any new wall structures).
- Establish climbing plants on walls and other vertical structures.
- Establish wildflower plug/bulb planting in amenity grassland.
- Integration of Sustainable Urban Drainage Systems (SUDS).
- Integration of green or grey roofs.

LE6 Long term impact on biodiversity

6. Were you appointed prior to commencement of development work activities on site?

Yes ☒ No ☐

7. Has the client / developer given you the responsibility to confirm whether all current EU and UK legislation relating to protection and enhancement of ecology has been (or will be) complied with during the design and construction process?

Yes ☒ No ☐

If yes, please provide details on all current EU and UK legislation that relates to the site:
Wildlife & Countryside Act 1981 (as amended)

8. Has the developer / client appointed you to produce an appropriate landscape/site ecology management plan covering at least the first 5 years after project completion?

Yes ☐ No ☒

EITHER:

a. If yes, and the management plan has already been produced does it include the following:

- management of any protected features on site
- management of any new, existing, or enhanced habitats
- a reference to the current or future site level Biodiversity Action Plan?

Yes ☐ No ☐

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OR

b. If yes, but the management plan is still to be produced (due to it being too early in the design/construction phase), have you provided the following information to the developer / client:

- scope of management plan
- key responsibilities, and with whom these responsibilities lie, e.g. owner, landlord, occupier?

Yes ☐ No ☐

If you have answered 'yes' to either question 8a or 8b please provide a brief explanation outlining the details

9. Has the client / developer required you, as part of your responsibilities, to provide recommendations and advice to minimise detrimental impacts on site biodiversity?

Yes ☒ No ☐

If yes, or not applicable, please briefly explain your reasoning:

The site only has low ecological value and no impacts onto biodiversity are predicted on site. Areas of high ecological value are present around the site and advice was given to minimise any impacts (such as providing a lighting scheme which takes into consideration the need for darkness of bats and dormice)

10. Do your responsibilities to the client / developer include providing advice and recommendations for the protection of ecological features?

Yes ☒ No ☐

If yes, or not applicable, please briefly explain your reasoning:

There is a small area of grassland (approximately 200m2) and shrubs which will be left untouched by the works. Such areas are to be protected by barriers to prohibit construction works.

11. Do your responsibilities to the client / developer include providing advice on the creation of a new ecologically valuable habitat, which is appropriate to the local area and is either nationally, regionally, or locally important, or supports nationally, regionally, or locally important biodiversity?

Yes ☐ No ☒

If yes, or not applicable, please briefly explain your reasoning:

.....

12. Do your responsibilities to the client / developer include providing advice and recommendations on when site works are to be avoided so as to minimise the disturbance to wildlife?

Yes ☒ No ☐

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If yes, or not applicable, please briefly explain your reasoning
However as the works footprint did not have any wildlife issues, no such recommendations were necessary on site.

Section E: Appendix

Copies of the following documentation are required to support the above statements and act as evidence of compliance with the BREEAM ecology criteria:

- The *suitably qualified ecologists* site/project specific report
- Written confirmation from the verifier of the ecology report (where necessary)
- Any supplementary documentation e.g. maps, plans, drawings, letters / emails of correspondence, etc.

Please include these details along with the appropriate reference to each document in the table below:

Document	Reference
Coach Park, Bluewater, Dartford, Kent - Preliminary Ecological Appraisal. Kent Wildlife Trust (September 2011)	
C1079 – Proposed Landscape Plan, Option G. Juice Architects 19/10/2011	

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Section F: Signature of Validation

I confirm that the information provided in this document is truthful and accurate at the time of completion.

Name of ecologist

[REDACTED]

Signature of ecologist:

[REDACTED]

Date 28/10/2011



Report

GVA
10, Stratton Street
London
W1J 8JR

Planning Statement

Bluewater, Dartford

Lend Lease

January 2012

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Appendices

Appendix 1	Site Plan
Appendix 2	DBC Pre-application Consultation Response

1. Introduction

- 1.1 This Planning Statement has been prepared on behalf of Lend Lease Global Investments Plc ("the applicant") in support of an application for full planning permission for the redevelopment of land off Bluewater Parkway, Greenhithe to provide a 110 bedroom Hotel (Class C1) with associated landscaping and highway works.
- 1.2 The original plans for the Bluewater complex included the provision of a hotel in this location to meet the demand generated by the wider Bluewater offer, and indeed outline consent was secured in 2000 for a hotel facility, although this permission has since expired. With the recent opening of Glow (events venue), there is now a need for a new hotel facility to provide accommodation to support the operation of the events venue, as originally planned.
- 1.3 This Statement comprises a series of sections which outline the planning rationale for the proposed development:
- Section 2 describes the site and the surrounding area
 - Section 3 provides an overview of the relevant planning history for the site and some background to the proposal
 - Section 4 describes the proposed development
 - Section 5 sets out details of the relevant planning policy in relation to the proposal
 - Section 6 provides an assessment of the proposal in the context of relevant policy
 - Section 7 provides a summary of the merits of the redevelopment proposals
- 1.4 In addition to this Statement, the application is supported by the following plans and documents:
- Existing and proposed plans;
 - Design and Access Statement ("DAS");
 - Transport Statement ("TS");
 - Sustainability Statement;
 - Ecological Scoping Survey; and
 - Arboricultural Impact Assessment ("AIA") Report.

2. Site and Surroundings

Site Location

- 2.1 The application site is located along the northern bank of North West Lake approximately 300m to the north west of part of the car park which serves Bluewater Shopping Centre and to the rear of Bluewater Police Station, off Bluewater Parkway.
- 2.2 The site is approximately 2km south west of Greenhithe for Bluewater railway station. Junction 1b of the M25 is approximately 4km (2.25 miles) to the west of the site. Central London is circa 30km (18 miles) to the west and the Dartford Crossing is approximately 5km (3.1 miles) to the north west.

Site Description

- 2.3 The site extends to 0.4 hectares and falls within the administrative area of Dartford Borough (see enclosed Site Location Plan at Appendix 1).
- 2.4 The northern site boundary is formed by a steep, landscaped bank rising to an emergency access road linking the Police Station with St James Lane. The Police Station itself forms the site's eastern boundary and a small lake forms the southern boundary. Another steep bank forms the western boundary, above which runs St James Lane.
- 2.5 The site comprises an area of hardstanding which accommodates a currently unused coach park, which was initially designed to serve the nearby shopping centre. There are no buildings on the site.

Surrounding Area

- 2.6 The site adjoins Bluewater Police Station along the eastern boundary, beyond which extends the site of the Bluewater Shopping Centre. Residential dwellings fronting St James Lane, St James Close and Hedge Place Road lie beyond the landscaped bank to the north, on top of the quarry.

- 2.7 Car parking for the shopping centre extends south beyond the lake which adjoins the site and further residential dwellings and Stone St Mary's Primary School lie beyond St James Lane to the west.

3. Planning History and Background to Proposals

- 3.1.1 The application site forms part of the former Western Quarry site, which was granted outline planning permission for redevelopment as the Bluewater regional shopping centre on 11th May 1990 (application ref: DA/88/336/OUT).
- 3.2 Various reserved matters applications were subsequently approved for the development of the wider site. With regard to the application site itself, an application for permission to install a coach park was withdrawn on 28th July 1997 (DA/96/00234/REM). It was followed by an application for approval of details to develop North West Lake for the development of the existing coach park, and was approved on 24th August 2000 (application ref: DA/97/00442/REM).
- 3.3 The most recent application for the site was outline application for the erection of 'a 150-180 bedroom hotel with associated meeting, restaurant and fitness facilities, 200 car parking spaces and new coach parking areas' was approved on 28th February 2002 (application ref: DA/00/00135/OUT).
- 3.4 However, no reserved matters application was submitted following this permission, which has recently expired, and there have been no applications of relevance submitted for the site since 2002.
- 3.5 The approved coach park has been largely underused since its development and whilst the expired outline permission was never implemented, this application proposes a reduced level of development in response to changing market requirements.

4. Proposed Development

- 4.1 This application proposes the redevelopment of the existing coach park to the north west of the Bluewater Shopping Centre to provide the following:
- Standalone 110 bedroom, 5 storey hotel building;
 - Ancillary bar and café facilities for guests;
 - 88 car parking spaces (including 6 spaces for disabled people);
 - 24 cycle parking spaces;
 - Highways works;
 - Service area; and
 - Landscaping works.
- 4.2 It is proposed to locate the hotel at the western end of the site with a service yard area to its rear, adjacent to the former quarry wall that forms the western site boundary. The hotel car park will extend east across the site.
- 4.3 The location of the hotel has been designed to minimise its visual impact and respect its position overlooking the adjacent lake, whilst providing an active frontage onto the hotel car park.
- 4.4 Importantly, the scale and mass of the hotel has been designed to ensure that the proposed building is significantly lower than the quarry wall, so that the building does not protrude out of the quarry basin, therefore minimising any visual impact on surrounding area outside of the quarry.
- 4.5 The proposed landscaping scheme has also been designed to complement the existing landscaping which characterises the former quarry walls that overlook the site to the north and west and banks of North West Lake to the south.
- 4.6 It is not proposed to alter access arrangements to Bluewater Police Station from Bluewater Parkway or into the site past the Police Station.

5. Planning Policy Framework

- 5.1 The preparation of this planning application has been informed by national, regional and local planning policy guidance. This section sets out the planning policies and documents that are of relevance to this planning application.

National Planning Policy

- 5.2 The proposed development requires this application to have been prepared taking into account national planning policy set out in the following national Planning Policy Guidance notes (PPGs) and Planning Policy Statements (PPSs):

- PPS1: Delivering Sustainable Development (2005) and PPS1 supplement 'Planning and Climate Change' (2007)
- PPS4: Planning for Sustainable Economic Growth (2009)
- PPG13: Transport (2001)
- PPS22: Renewable Energy (2004)
- PPG24: Planning and Noise (2001)

Regional / Strategic Planning Policy

South East Plan

- 5.3 The Regional Spatial Strategy ("RSS") for the South East (South East Plan or 'SEP') was adopted in May 2009. The Secretary of State has confirmed that the Government is seeking to abolish RSSs through the adoption of the Localism Act. However, until the Strategic Environmental Assessments ("SEA") for the adoption of the Act have been completed, the SEP retains material weight in the consideration of planning applications.
- 5.4 **Policy TSR5** identifies the need for hotel development to be located in close proximity to visitor attractions and to seek to increase access for all by sustainable transport modes.

Local Planning Policy

Dartford Borough Council Local Plan (1995) Saved Policies

5.5 The Dartford Borough Local Plan ("DBLP") was adopted in 1995, with a Second Deposit Draft Review prepared in 2004 (but not formally adopted). A number of adopted Local Plan (1995) policies were saved under Direction from the Secretary of State from 25 September 2007. The saved policies relevant to this application are set out below:

- S2: Provision of community, leisure, tourist and retail facilities
- T5: Public Transport and Infrastructure
- T9: Improvement of public transport, car parking and interchange facilities
- T20: Formation of new accesses onto distributor roads
- T21: Agreements for Highways Improvements Related to Development
- T23: Provision of off-street parking and rear access arrangements
- T27: Provision for Pedestrians in New Development
- RT9: Development of hotels and other tourist accommodation
- B1: Design of new development
- B3: Hard and Soft Landscaping Proposals
- B5: Public Arts and Crafts
- B14: Access for people with disabilities

5.6 The relevant parts of these policies were largely updated through the Local Plan Review and brought into line with more recent national policy. Whilst they still form the statutory development plan, the Council attaches significant weight in determining planning applications to the unadopted local plan review, outlined in detail below.

Dartford Local Plan Review ("DLPR") (2000-04)

5.7 The Dartford Local Plan Review comprises the Deposit Draft Plan 2000, the Second Deposit Draft of 2002 and further amendments issued in January and April of 2004. In January 2004, the Council abandoned progress with the Local Plan Review to commence work on the preparation of a Local Development Framework.

5.8 The Second Deposit Draft was not subject to a Public Inquiry before its abandonment. However, as they are based upon more recent national policy, the policies contained

within it provide more up-to-date local policies than the adopted Local Plan. For this reason, the Council considers the Second Deposit Draft a 'material consideration' for development control purposes.

- 5.9 The relevant policies within the DLPR are summarised below:

Development and Design

- 5.10 **Policy DD5** protects Dartford's Green Grid network from development (either in or in close proximity to) that would have a detrimental impact on the amenity, value and environmental benefits of the Park.
- 5.11 **Policies DD11 to DD13** consider overarching design issues. **Policy DD11** requires high quality design, compatible with the surrounding buildings and existing topography. Key design issues such as daylight, sunlight, privacy, energy efficiency and landscaping/open space also require consideration. **Policy DD12** requires development for the public to be safe and accessible to all, including those with impaired mobility. **Policy DD13** considers site security, including natural surveillance, legible layouts, linkages and provision of good lighting, walkways and boundary treatments to reduce the likelihood of vandalism and/or personal attacks.
- 5.12 **Policy NR8** also states that preference will be given to development proposals that provide Sustainable Urban Drainage Systems (SUDS) to minimise the effect of surface water run-off on the local water environment.

Leisure Development

- 5.13 **Policy LRT 1** states that in locations other than Dartford Town Centre or on the edge of the town centre, applications for leisure development will be required to demonstrate that they will provide facilities of an appropriate size and scale, will not give rise to unacceptable disturbance to local residents and are well served by public transport. Proposals must also avoid generating unacceptable levels of traffic. However, **paragraph 9.3.8** identifies the then extant permission for a hotel at Bluewater and identifies the wider site as "an important focus for enhanced leisure provision in the future".
- 5.14 Point 3 of **Policy R2** identifies that proposals for additional hotel facilities over and above that permitted on 30th June 2001. However, **Policy LRT10** goes on to state that one hotel will be permitted to be developed at Bluewater. Given the provisions of **Policy LRT10** and

the fact that approval for a 150-180 bedroom hotel was granted on 28th February 2002, the application of this aspect of the policy is considered questionable.

Transport

- 5.15 **Policy T7** requires new development to assure the provision of transport infrastructure and services. The development should not have a detrimental impact on the highway and transportation network that cannot be mitigated. **Policy T8** seeks to ensure that proposals include off site transport measures as appropriate.
- 5.16 **Policy T11** and its appendix sets maximum parking standards for new development and requires accessibility to public transport, highway safety and access for mobility impaired people to be taken into consideration. **Policy T15** and its appendix sets out minimum cycle parking standards for new development.
- 5.17 **Policy T16** considers site design and transport measures, requiring schemes to promote sustainable travel and minimise car use. This will include cycle and pedestrian routes and ease of accessibility.
- 5.18 **Policy T17 and Policy T18** require a Travel Plan and Transport Assessment to accompany planning applications.

Dartford Borough Local Development Framework

Dartford Core Strategy (September 2011)

- 5.19 The Council adopted its Core Strategy Development Plan Document ("DPD") and Proposals Map on 26th September 2011. Core Strategy policies therefore form the principal consideration in the determination of planning applications. Until such time as the other DPDs (such as Site Allocations and Development Management Policies) are adopted (not expected until at least mid 2012), relevant Local Plan policies will retain material weight in determining planning applications.
- 5.20 **Policy CS12** of the Core Strategy states that main shopping centres such as Bluewater will act as the main focus for leisure activity and that the Council will work with developers to grant permission for development that supports their role. The assessment of development proposals at Bluewater will take into account their ability to support the centre's role as a

regional shopping attraction. However, proposals will need to ensure that highway impacts are minimal and that the design integrity of the centre is maintained. Through **Table 3** of **Policy CS12**, the Core strategy supports the provision of a new hotel at Bluewater, with recognition that Bluewater needs to evolve to maintain its competitive position as a regional level centre.

- 5.21 **Policy CS15** encourages the close interrelationship between complementary land uses, such as retail and leisure facilities.
- 5.22 **Policy CS23** sets out the requirement for new development to reduce its energy use through the implementation of sustainable energy initiatives.

6. Planning Assessment

6.1 This section assesses the proposals against the Development Plan and other material considerations, including national, regional and other planning guidance. To set this assessment in context in planning policy terms, we highlight the following in relation to the application proposals and their general conformity with planning policy:

- The proposed development meets an identified need for a hotel facility to support and complement existing land uses at the Bluewater Shopping Centre;
- There is overwhelming local planning policy support for a hotel dedicated to accommodating visitors to the Bluewater Shopping Centre; and
- The application proposal meets local policy requirements for a new hotel at Bluewater in terms of its location, scale, design and accessibility.

6.2 Our detailed planning policy assessment of the application proposal specifically addresses the following policy considerations:

- Principle of development
- Design and Layout
- Transport and Parking
- Sustainability and Energy

Principle of Development

6.3 The principle of the proposed redevelopment of the site is in accordance with national, regional and local level planning policy.

6.4 Provision for a hotel as part of the development of the Bluewater Shopping Centre was made under the description of development for the outline planning permission granted in May 1990. Whilst no hotel was brought forward as part of the initial shopping centre development, the appropriateness of the site for hotel development was confirmed by the 2002 permission for a 150-180 bedroom facility.

- 6.5 The application proposal to provide a hotel in place of an unused coach park, in a highly sustainable location adjacent to the Bluewater Shopping Centre, is in accordance with:
- Sustainable development and brownfield land principles and objectives of PPS1;
 - Requirement for leisure development to reduce carbon emissions, provide accessibility for a range of transport modes, secure high quality design and have a beneficial impact on the local economy and employment, in line with the impact test of PPS4 Policy EC10;
 - Requirement to deliver development on sites accessible by a variety of transport modes as promoted by PPG13;
 - Provision of a new hotel facility, located in close proximity to a regional shopping centre, where it can support and complement existing land uses to enhance the position of the shopping centre in the regional hierarchy as required by Core Strategy Policy CS12; and
 - Maintenance and preservation of the Green Grid, in line with local policy.
- 6.6 The proposed hotel will fulfil a need identified in the Core Strategy for visitor accommodation to serve the various land uses that comprise the Bluewater Shopping Centre.
- 6.7 The Council indicated its acceptance of the need and demand for a hotel on the site within pre-application advice dated 23rd June 2011 (Appendix 2). The principle of the development of a hotel on the Bluewater site is also supported in local planning policy by **DBLP Policies S2, RT9, DLPR Policies LRT1, LRT10 and R2** and **Core Strategy Policy CS12**.
- 6.8 The proposed development will compliment Glow, the Bluewater Events Centre approved on 27th April 2007 (application ref: DA/06/00139/FUL) and will cater for the visitor accommodation needs of the wider Bluewater site. Furthermore, hotel use is quoted within the description of development for the outline planning permission for the initial development of the shopping centre, granted in May 1990, and permission for such development was approved for the application site as recently as 2002.
- 6.9 On the basis that the hotel use at Bluewater is promoted through Core Strategy Policy CS12 and is therefore subject of a site allocation, there is no requirement for a sequential assessment in line with the provisions of PPS4 Policy EC15 to be undertaken, nor for any assessment of impact of the proposal on other centres as required by PPS4 EC14.

- 6.10 Therefore, it is clear that there is planning policy and planning history-based support for the principle of the development of a hotel on the site, which is a key material consideration in the determination of this planning application.

Impact of the Proposal

- 6.11 As economic development it must satisfy the general impact tests set out at PPS4 Policy EC10.2. We deal with each of these tests in turn below:

a) Reduction of carbon emissions

- 6.12 The sustainable energy initiatives that have been incorporated into the scheme are described in more detail below and in the enclosed Sustainability Statement. Measures to reduce carbon emissions from the development in line with 2006/2010 targets include the incorporation of a Combined Heat and Power (CHP) unit, a timber framed building design that maximises the use and procurement of sustainable building materials and techniques, solar gain and natural ventilation, thus helping to maximise the resilience of the development to climate change. These measures will contribute to the scheme's achievement of a BREEAM 'Excellent' rating.

b) Accessibility

- 6.13 The enclosed TS and relevant assessment section below identifies the incorporation of car (for able-bodied and disabled people) and cycle parking and proposed improvements to pedestrian links with the wider Bluewater site into the scheme, which combine to ensure that the application site is highly accessible via a variety of transport modes and will not adversely impact upon the capacity of the local highway network.

c) High quality design

- 6.14 The enclosed DAS and relevant section below demonstrate that the proposal has been carefully designed to make the most efficient use of the site, whilst ensuring that landscaping and the general layout of the development preserves and enhances the character and quality of the surrounding area in terms of views into and from the site. Pedestrian and highway access to and from the site will also benefit from the proposal.

d) Impact on economic and physical regeneration

- 6.15 The section below describes the positive impact that the proposal will have in terms of helping to retain additional expenditure and attract additional visitors to Bluewater, whilst the proposal will also bring what is currently an underused site back into a more beneficial use.

e) Employment Impact

- 6.16 The proposed hotel will provide approximately 200 jobs during the construction phase of development and will then create a further 35 full and part time jobs once the hotel is operational, the majority of which will be sourced locally. Therefore, the proposal will have a beneficial impact on local employment.
- 6.17 Overall, the proposal will have a positive impact on the site, its surroundings and the local economy and satisfies the **PPS4 Policy EC10.2** general impact tests.

Merits of the Principle of Development

- 6.18 The proposed hotel will help to maintain Bluewater as a regional shopping centre, in line with **Core Strategy Policy CS12** and will provide for the accommodation needs of visitors to the existing events centre, retail stores, restaurants and other leisure facilities on the wider site. The addition of a hotel to the site will help to attract and retain visitors to the site for longer periods, encourage business trips and consequently retain greater expenditure within the site.
- 6.19 The proposed hotel, which will be operated by Travelodge once constructed, will encourage expenditure within the local economy through its limited on-site ancillary uses such as its café/restaurant and bar. Recent research undertaken by Travelodge suggests that only 25% of visitors purchase breakfast at the store, whilst just 14% purchase an evening meal. Therefore, a significant proportion of guests are likely to purchase food on the wider Bluewater site, in addition to making use of the plethora of retail and other leisure facilities on the site.
- 6.20 The proposal will also provide the following benefits for the site and the surrounding area:
- More efficient use of an underused brownfield site;

- Enhanced landscaping to improve the visual appearance and biodiversity of the site;
- Considered building design to maintain the design integrity of the wider Bluewater site;
- Careful site layout to respect its Green Grid location and appearance from the adjacent lake and surrounding area;
- Provision of a SUDS to improve drainage on the site and reduce flood risk; and
- Improved access to public transport and pedestrian access to the wider Bluewater site.

Design and Layout

- 6.21 The design process for the scheme has been carried out in a collaborative manner with the Council, leading to a design that accords with design guidance contained in relevant local planning policy. The enclosed DAS provides a detailed assessment of the scheme's design and how it responds positively to its context.
- 6.22 The proposed hotel building will incorporate the following design features to ensure that it maintains the integrity of the existing built form of the wider Bluewater site, whilst utilising materials that maximise its sustainability credentials in order to meet BREEAM 'Excellent' rating requirements:
- Location in the western corner of the site to minimise visual impact on the surrounding area and view of North West Lake;
 - Building to be of timber frame construction;
 - Brickwork to be light coloured to reflect the chalk escarpment;
 - Clear glazing for all bedrooms and public areas within ground floor elevations;
 - Horizontal timber rainscreen cladding applied to upper floors of southern and eastern elevations and part of northern and western elevations;
 - Remaining areas of upper floor elevations cladded by light coloured render to reflect the chalk escarpment; and
 - Windows and doors to be installed with timber frames.
- 6.23 In addition to maintaining the integrity of the existing built form on the wider Bluewater complex, the timber cladding and window and door frames and colouring of proposed

render ensure that the proposed building also reflects its location against a landscaped bank and overlooking the North West Lake, helping it to integrate with its surroundings and reduce its overall visual impact.

6.24 Several other features of the proposed development will further enhance the integration of the development into the surrounding area:

- Enhanced landscaping to improve the visual appearance and biodiversity of the site; and
- Use of a SUDS to improve surface water drainage from the site and regulate discharge into the adjacent lake.

6.25 The proposed design of the hotel and the layout of the development ensure that the proposal is compliant with **DBLP Policies B1 and B3** and **DLPR Policies DD11 to DD13**.

Transport and Movement

Highway Network

6.26 A TS has been undertaken by Peter Brett Associates to support of this application. The TA concludes that the application proposal will not lead to any significant adverse conditions on the highway network.

6.27 The transport proposals for the application scheme have been designed to ensure that no major works need to be undertaken on the existing road network.

6.28 The hotel will be accessed by visitors from the car park to the front of the building, which will in turn be accessed from the existing Bluewater Parkway access point that serves the existing Coach Park. This arrangement ensures that the site will remain easily accessible, in accordance with **DLPR Policy T16**.

6.29 The TA demonstrates that the highway impacts generated by the development proposal can be sufficiently accommodated on the existing highway network and will not result in any significantly adverse impacts. The TA therefore demonstrates that the highway proposals accord with **DBLP Policies T5, T20 and T21** and **DLPR Policies T7, T9, T13, T16 and T18**.

Parking

6.30 The following parking spaces are provided by the proposal:

- 88 car parking spaces (included 6 spaces for disabled people); and
- 24 cycle parking spaces.

6.31 The level and mix of parking provided by the proposal is below the maximum car and cycle parking standards and provides adequate disabled car parking spaces to be compliant with the standards referenced by **DLPR Policy T11** set out at **DLPR Appendix 9** and is compliant with **DBLP Policies T9** and **T23**.

Public Transport

6.32 Bluewater already benefits from a high degree of accessibility by public transport. The hotel will be incorporated into the Bluewater Green Travel Plan which has already achieved a public transport share of 20% for employees and 12% for visitors.

Walking and Cycling

6.33 It is proposed that pedestrian/cycle links from the hotel will tie into existing links surrounding the North West Lake which in turn link into the rest of the cycle network serving the Bluewater Shopping Centre. There are approximately 4km of cycle paths within Bluewater. There are links between these cycle routes and National Cycle Network Route 1.

6.34 The scheme will provide 24 cycle parking spaces for visitors and staff, as requested in pre-application advice provided by the Environment Agency that are safe, secure and convenient to use. Therefore the proposal is compliant with **DLPR Policies TR11**.

Trees and Landscaping

6.35 The supporting DAS provides an assessment of the landscape improvements proposed to help to integrate the scheme with its surroundings to ensure that it preserves and maintains the Green Grid within which the site falls.

6.36 The enclosed AIA Report carried out by Landmark Trees concludes that there will be no significant impact on existing trees as a result of the proposed development. Those trees

recommended for felling are not considered to be individual significance. Their loss will not affect the visual character of the area and will be compensated by their replacement with 12 native maple trees. The AIA also recommends the protection of any trees during construction through the use of 2.4m mesh screens.

- 6.37 The application is therefore compliant with the provisions of **DBLP Policy B3 and DLPR Policy DD11**.

Flooding and Drainage

Flooding

- 6.38 The site is not identified as falling within Environment Agency Flood Risk Zones 2 or 3 and, whilst it lies adjacent to North West Lake, pre-application advice from the Environment Agency (letter ref: KT/2011/113137/01-L01) has indicated that because the site is less than 1 ha in size, a Flood Risk Assessment is not required.

Drainage

- 6.39 It is proposed to install a Sustainable Urban Drainage System ("SUDS") to improve and regulate drainage from the site, with associated beneficial impacts on the risk of flooding at the site and its local water environment, in compliance with **Core Strategy Policy CS24**.
- 6.40 The proposed SUDS will ensure that water captured from hardstanding will run via a petrol interceptor and reed bed filter prior to entry into the adjacent lake. Discharge into the lake will be regulated and should the lake reach capacity, an emergency pump will relieve capacity by feeding water into the existing storm water system, in keeping with existing practice at the site.
- 6.41 Foul water drainage will be connected to the existing chamber close to the existing Police Station, which is then pumped into the public sewerage network along Beans Lane to the east of the site.
- 6.42 The existing drainage system is shown on the enclosed plans prepared by 40seven (plan refs: 56152-P sheets 1-3), which are provided for reference purposes only in support of this application.

Ecology

- 6.43 The Ecological Scoping Survey, prepared by Kent Wildlife Trust does not identify the presence of any protected species on the site and states that no detrimental impact is expected to be exerted on any designated nature sites. The proposed scheme therefore complies with **DLPR Policy DD5**.

Sustainability and Energy

- 6.44 The development has been designed to high sustainability standards and aims to reduce its environmental impact through a joined up process from design through to construction and operation. The scheme encourages sustainable use by visitors by providing good access to public transport and cycle storage facilities and linking into the existing foot and cycle path networks that run through the wider Bluewater site.
- 6.45 The enclosed Sustainability Statement shows that the building has been designed to meet the BREEAM 'Excellent' rating as a minimum. The following sustainable energy initiatives will reduce carbon emissions resulting from the development:
- On-site electricity and hot water generation from a low carbon Combined Heat and Power (CHP) unit;
 - Building design to maximise solar gain;
 - Timber frame construction;
 - Responsibly sourced building materials;
 - Low energy lighting;
 - Natural ventilation systems;
 - Rainwater harvesting; and
 - Low flow bathroom fixtures and fittings.
- 6.46 The scheme therefore exceeds planning policy requirements to seek to incorporate sustainable energy initiatives and reduce carbon emissions as set out in **PPS4 Policy EC10 (a)** and **Core Strategy Policy CS23**.
- 6.47 The development seeks to achieve high levels of energy efficiency. The core of this approach is the provision of an on-site CHP unit.

Crime Prevention

- 6.48 Public areas within the proposed hotel will be covered by CCTV cameras, whilst the site lies adjacent to the Bluewater Police Station. Clear glazing for all public areas at ground floor level and bedrooms at upper floors will also increase natural surveillance of the area surrounding the hotel. These aspects of the development will combine to ensure that a very high level of security is provided for staff and visitors to the hotel.

Summary

- 6.49 The careful preparation of the proposal has resulted in a scheme which is in accordance with the provisions of relevant planning policy and provides significant additional benefits which should be considered as material considerations in the determination of the application.

7. Summary and Conclusions

- 7.1 The proposal for the redevelopment of the Bluewater Coach Park site for a 110 bedroom hotel offers an opportunity to deliver highly sustainable development on a previously developed site which is currently underused for the purpose it was originally intended.
- 7.2 This Planning Statement has set out the proposals and demonstrated that they accord with relevant national, regional and local planning policy. This Statement has identified a significant number of supporting factors and benefits associated with the proposal, which should be considered as material considerations in the determination of this application.
- 7.3 The merits of the scheme comprise the following:
- The proposed hotel will provide a valuable supporting facility for the existing land uses on the wider Bluewater Shopping Centre site to maintain its position as a regional shopping destination;
 - The proposal has been carefully designed and located to maintain the design integrity of the wider Bluewater site and to have a minimal visual impact on the surrounding area;
 - The redevelopment will improve the appearance of the site and preserve and enhance the landscape around the site, in-keeping with its location within the Green Grid;
 - The redevelopment will employ sustainable energy initiatives throughout its development, from design to construction and operation in order to minimise energy use and has been designed to achieve a BREEAM 'Excellent' rating;
 - The proposed development includes provision to improve the layout and accessibility of the site for all; and
 - The proposal will provide high levels of safety and security for staff and hotel visitors through the use of CCTV cameras in all public areas within the hotel.
- 7.4 Overall, the proposals offer clear and significant benefits and accord with relevant national, strategic and local planning policy objectives, which form a comprehensive range of material considerations that support the delivery of the proposal.

- 7.5 Based on the above assessment, the applicant considers that there is a strong justification for planning permission for the redevelopment of the Coach Park site for delivery of a 110 bedroom hotel to be granted at the earliest opportunity.

Appendix 1

Site Plan

LEGEND

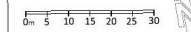
-  REED BEDS
-  WOODLAND (UNSURVEYED)
-  LOADING BAY
-  BIN STORE
-  EXTERNAL PLANT / FUEL STORE
-  DELIVERY & REFUSE ROUTE
-  ACCESSIBLE PARKING BAY (x6)
-  BICYCLE PARKING (x24)
-  NEW HARDSTANDING
-  HARDSTANDING RETURNED TO LANDSCAPING
-  EXISTING HARDSTANDING
-  DEVELOPMENT OUTLINE
-  EXISTING TREES
-  TREES TO BE REMOVED
-  NEW/REPLACED TREES
-  REALIGNED FOOTPATH

FOR LANDSCAPING SEE JUICE P1007

PARKING:
- 6 ACCESSIBLE SPACES
- 82 STANDARD SPACES
(2.4m x 4.8m)
- 24 BICYCLES

NOTES:

Building footprint and parking layout shown on site plan drawing (September 1996) provided by Waterman Partnership Consulting Engineers



A 16/12/11 1st Issue

NO. DATE ISSUE

REVISIONS

CLIENT

LENDLEASE

PROJECT

HOTEL BLUEWATER

DRAWING TITLE

PROPOSED LOCATION PLAN

DATE 16/12/11

DRAWING NO.

REVISION

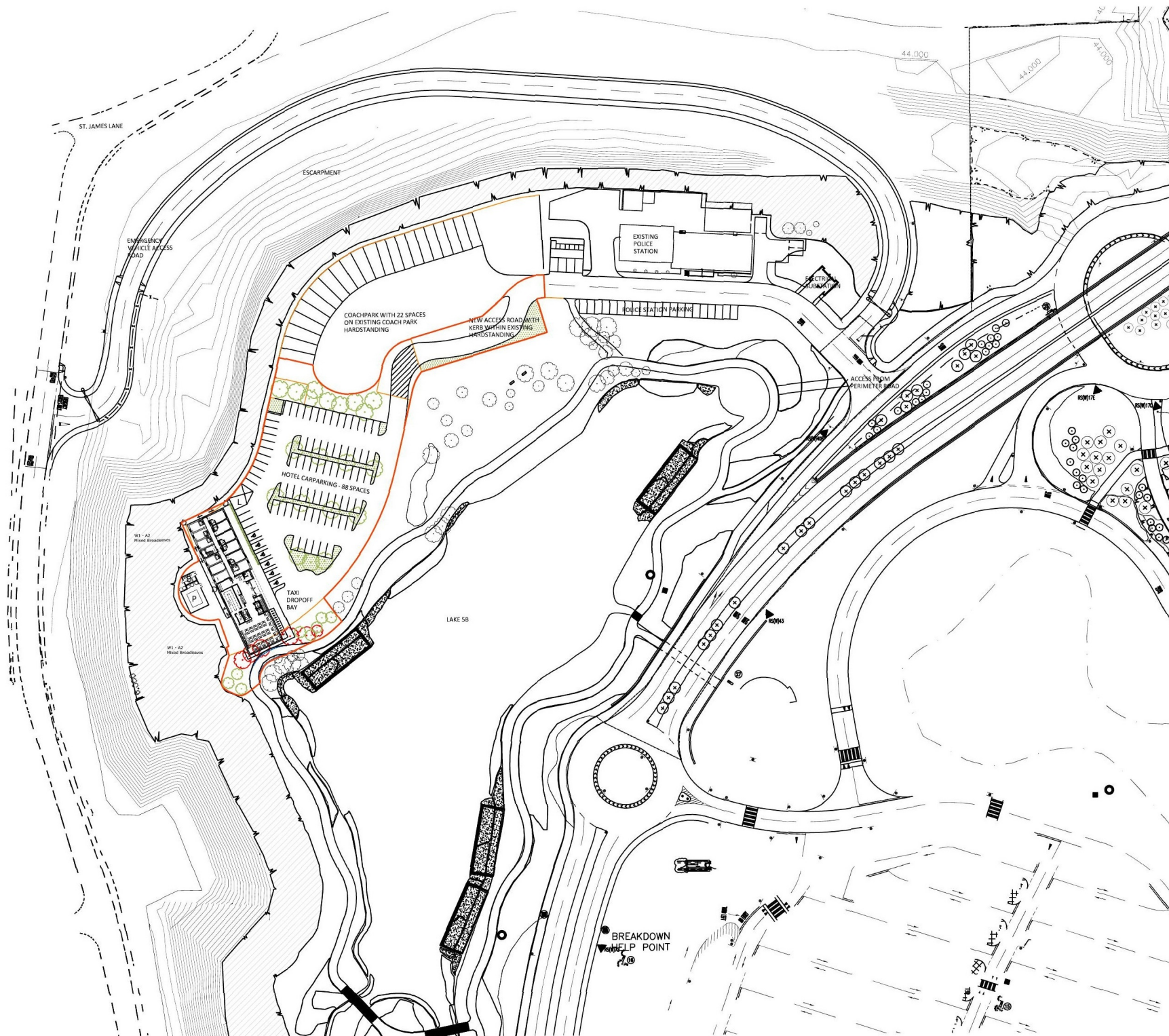
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P1003

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JOB NO.

1228



Appendix 2

DBC Pre-application Consultation Response

David Roach
GVA
10 Stratton Street
London
W1J 8JR

Please ask for: Paul Nicholls

Direct Line:

Direct Fax:

E-mail:

DX: 142726 Dartford 7

Your Ref:

Our Ref: 11/00809/COUNT

Date: 23rd June 2011

Dear Mr. Roach,

RE: Erection of a hotel with up to 130 bedrooms at land adjacent to North West Lake, Bluewater, Stone.

I refer to the above and our meeting on 21st June 2011. I set out the main issues below:

Principle of Development

The expired outline permission of 2002 was judged against adopted Local Plan policies from 1995. If an application is to be submitted in the near future the same policies would apply, although I am mindful of the impending decision by the Planning Inspectorate in relation to the examination in public of the Council's Core Strategy Proposed Submission, which is likely to result in greater weight being given to the policies contained therein.

Bluewater is recognised in the Core Strategy Proposed Submission as having an established role as a high quality regional-level comparison shopping centre that is likely to experience considerable competitive pressures from new and expanding regional shopping centres in the near future. As an accepted driver for high quality developments in the area, the Council recognises the need for Bluewater to maintain its position relative to other regional centres and to continue to act as a driver for high quality developments in the near future, particularly at Ebbsfleet Valley.

Policy R2 of the Local Plan Review Second Deposit Draft 2004 also supports the provision of a hotel at Bluewater subject to it not exceeding the scale of the previously approved outline scheme. Any such application will also be judged against Policy EC10 of PPS4 (Planning for Sustainable Economic Growth).

With the subject site being similar to the previously approved outline scheme for a hotel with up to 180 bedrooms, I consider that the principle of developing this site for such a leisure use is acceptable and will complement the events centre. With proposed elevations being unavailable at the meeting it should be noted that the Council are keen to ensure that the final design of the hotel is of a quality that complements and builds upon the quality of Bluewater.

Siting

Given that this is similar to the previously approved application for a hotel, I have no objections to this. In my opinion the site appears to be the most suitable within the former quarry with it

being sufficiently separated from the confines of the main shopping centre, but at the same time having adequate pedestrian access through the park and around the lake. The Council may require details of a signage strategy to include references to the hotel from John Lewis (for the benefit of pedestrians) and throughout the road network (for vehicles).

Subject to the final design, I have no objections to either of the sketches that were presented at the meeting.

Highways

In general, Les Seaborn of Kent Highway Services confirmed that there would be no objections and no requirement for contributions, subject to a number of conditions:

- (1) The layout should include a suitable turning area close to the front for deliveries and for drop-offs;
- (2) Number of beds shall not exceed 130;
- (3) Number of car parking spaces shall not exceed 130;
- (4) The hotel is for overnight stays only and has no conference or other facilities for hire;
- (5) The hotel is considered to be ancillary to the shopping centre and the Events Venue;
- (6) Secure weatherproof parking should be provided for cyclists at the rate of 20% of the parking provision with room to be expanded if required;
- (7) The size of the coach park is not reduced below 20 parking spaces.

Sequential Test

The schedule of further minor proposed changes to the submission core strategy, as submitted in June 2011, referred to changes to Table 3 on page 60 (Role of Shopping Centres). Amongst these changes, 'hotel' is proposed to be added to the 'Services Provided'. As such the Council accepts the need and demand for a hotel at Bluewater and therefore does not require a sequential test as part of the submission.

Impact of Development on North West Lake

I have consulted the Environment Agency on the proposal and await their comments. I will forward their comments on to you as soon as they are received.

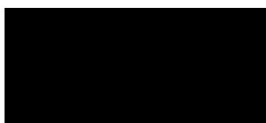
Validation Documents

Should you decide to proceed with an application, the following documents will need to accompany it:

- design and access statement;
- tree survey;
- parking plan with swept curves;
- transport statement.

In the circumstances I hope this is of assistance. Please do not hesitate to contact me should you require any further information. I would stress that the above information is an expression of officer opinion and will not prejudice or compromise the decision of the Council with regard to this or any other matter.

Yours faithfully,



Paul Nicholls
Senior Planner

Lend Lease

Bluewater Hotel

Transport Statement

Project Ref: 25596/001

December 2011

Peter Brett Associates LLP
7 SOHO SQUARE
LONDON
W1D 3QB

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Document Control Sheet

Project Name: Bluewater Hotel
Project Ref: 25596/001
Report Title: Transport Statement
Date: December 2011

	Name	Position	Signature	Date
Prepared by:	Daniel Jackson	Assistant Engineer		12.12.2011
Reviewed by:	Robert Parker	Divisional Director		12.12.2011
Approved by:	Robert Parker	Divisional Director		12.12.2011
For and on behalf of Peter Brett Associates LLP				

Revision	Date	Description	Prepared	Reviewed	Approved

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Bluewater Hotel
Transport Statement

1 Introduction

- 1.1.1** Peter Brett Associates (PBA) have been commissioned by Lend Lease Ltd to provide a Transport Statement in support of their planning application for a 110 bed hotel at the land adjacent to North West Lake, Bluewater, Stone. The hotel will be operated by Travelodge and its main purpose will be to provide a local hotel for the use of people visiting Bluewater and in particular for those working or visiting the new exhibition venue at the centre. The provision of an on site facility will therefore remove the need for people to find accommodation outside the centre and then have to travel into the centre on a daily basis.
- 1.1.2** A previous outline application for a larger 180 bed hotel with associated leisure facilities was made in February 2000 and was supported by a full Transport Assessment. The outline application gained approval in February 2002 but was not implemented and expired in February 2005.
- 1.1.3** This report provides a response to the comments made by Dartford Borough Council (DBC) following their meeting with David Roach of GVA on 21st June 2011 regarding the development proposals. DBC's comments are set down in their letter dated 23rd June 2011 and a copy of this letter is provided within Appendix A.
- 1.1.4** Within DBC's comments Les Seaborn of Kent Highways Services (KHS) confirmed that a simple Transport Statement rather than a comprehensive Transport Assessment will be required and that there are no requirements for contributions, subject to the following conditions:
- The layout should include a suitable turning area close to the front of the hotel for deliveries and for drop-offs;
 - Number of beds shall not exceed 130;
 - Number of parking spaces should not exceed 130;
 - The hotel is for overnight stays only and has no conference or other facilities for hire;
 - The hotel is considered to be ancillary to the shopping centre and Events Venue;
 - Secure weatherproof parking should be provided for cyclists at the rate of 20% of the parking provision with room to be expanded if required;
 - The size of the coach park is not reduced below 20 parking spaces.
- 1.1.5** As part of this statement we have undertaken a review of the TA which accompanied the previous application and have provided an updated trip generation assessment.
- 1.1.6** This statement is set down as follows:
- Section 2 provides a review of relevant transport policies at a National and Local Level;

Bluewater Hotel
Transport Statement

- Section 3 sets down the development proposals, including a review of the tracking assessment that has been undertaken;
- Section 4 provides a review of the TA for the previous application and draws out the information that is relevant to the current application;
- Section 5 provides a trip generation assessment for the current development proposal; and
- Section 6 provides a summary and conclusions.

2 Policy Review

2.1 PPG 13

2.1.1 PPG13 sets out the Government's overall strategy for a sustainable transport system, with the objectives of integrating planning and transport at the national, regional, strategic and local level to:

- Promote more sustainable transport choices for people and for moving freight;
- Promote accessibility to jobs, shopping, leisure facilities and services by public transport, walking and cycling; and
- Reduce the need to travel, especially by car.

2.1.2 PPG13 encourages giving greater priority to walking by reducing the actual walking distance between land-uses and to public transport. It also promotes the use of cycling as an alternative to private car travel by providing safe and secure cycle parking within developments.

2.2 Dartford Adopted Core Strategy

2.2.1 Policy CS 15: Managing Transport Demand lists the ways in which the Council will aim to reduce the need to travel, minimise car use and make the most effective use of the transport network. Some of these methods are to 'require major development sites to make provision for Fastrack' and to 'work in partnerships with developers, Kent County Council and cycling groups to implement an integrated walking and cycling network joining communities with the facilities they need to access, primarily through the Green Grid and including the Public Rights of Way network'.

2.3 Planning Policy Statement 4 (PPS4): Planning for Sustainable Economic Growth

2.3.1 EC10.2 – b states that 'all planning applications for economic development should be assessed against the following impact considerations: the accessibility of the proposal by a choice of means of transport including walking, cycling, public transport and the car, the effect on local traffic levels and congestion (especially to the trunk road network) after public transport and traffic management measures have been secured'.

2.4 Local Plan Review Second Deposit Draft 2004

2.4.1 Policy R2 states that 'retail development in the Central Business Area will normally be permitted if they: relate satisfactorily to existing shopping facilities...'.

2.4.2 The development proposals aim to meet these policy objectives by creating a hotel facility that can complement the existing Bluewater shopping centre and the soon to be completed Exhibition Centre. The hotel location is situated close to the Bluewater Bus Station which provides a vast range of services that tie in with other existing public transport links such as Greenhithe Rail Station.

Bluewater Hotel

Transport Statement

- 2.4.3** The development proposals also provide a tie in with the existing pedestrian/cycle links with the Bluewater site. These in turn connect with more strategic links, such as National Cycle Route 1, within and with the Green Grid Pedestrian Network.

3 Development Proposals

3.1 Hotel

- 3.1.1 The proposed size of the hotel is modest, with 110 bedrooms, it will provide no conference or other facilities for hire and is considered to be ancillary to the shopping centre and the new Events Venue at Bluewater. The hotel will house a restaurant but this will provide meals for guests only.

3.2 Parking

- 3.2.1 One parking area will be for cars and provides 88 parking bays, this includes 6 disabled parking bays which are all located within 20m of the hotel entrance. This provision is in accordance with the prevailing parking standards for hotel which allow a maximum provision of 1 space per room. Their location is shown in Figure 1. Swept path analysis of the car park layout has been undertaken and shows that it can accommodate all of the vehicles that will be expected to use it. This swept path analysis is contained in Appendix B.

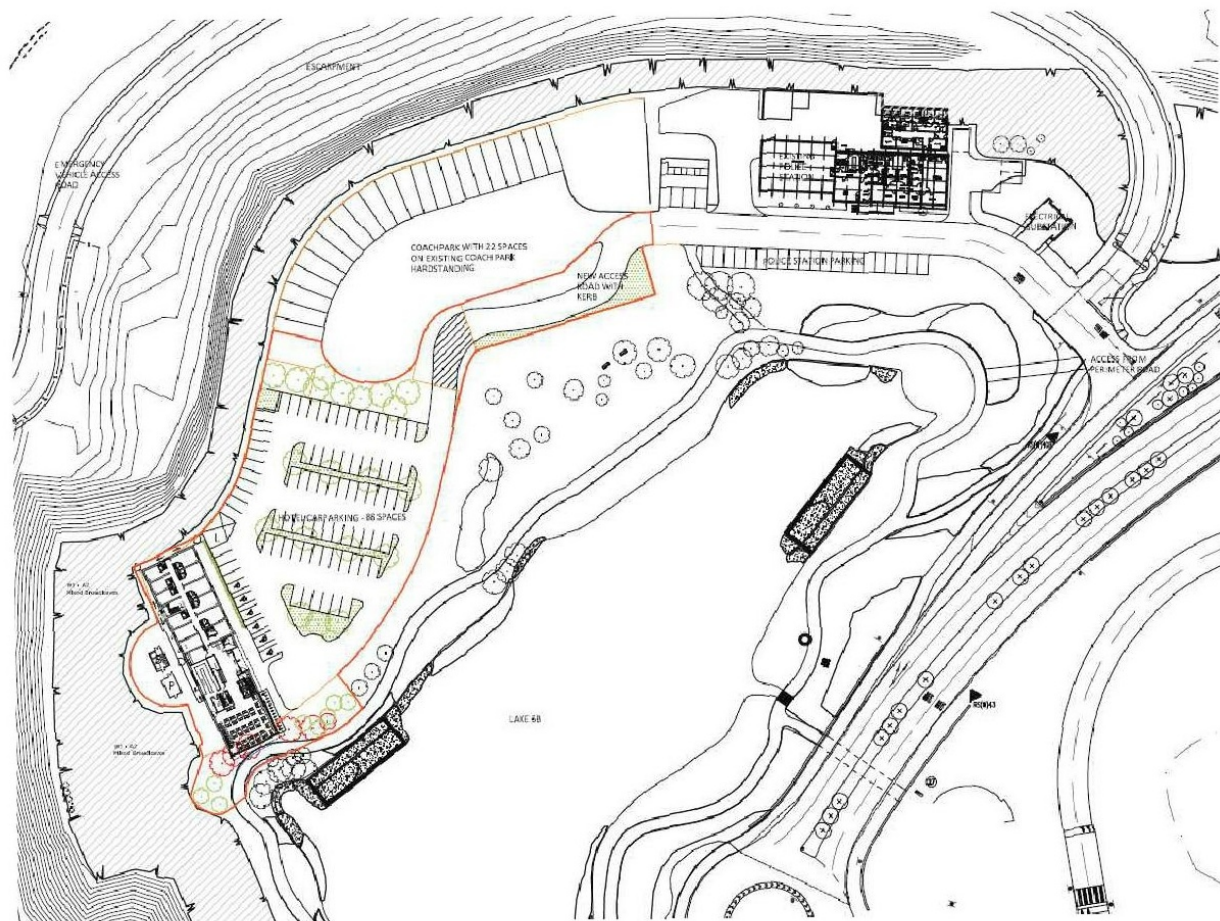


Figure 1 – Proposed Site Layout

3.3 Cycle Parking

- 3.3.1** A total of 13 Sheffield cycle parking stands are currently proposed which will provide 26 cycle parking spaces. This is in line with the '20% of the parking provision' requirement.
- 3.3.2** The cycle parking is located within 20 metres of the entrance to the hotel and will be covered. The location of the parking is shown in Figure 1.

3.4 Servicing

- 3.4.1** A loading area has been provided to the north-east of the building and is situated next to the bin stores which are accessed via a delivery route which links them to the kitchen at the back of the building. All refuse collections and deliveries will be made via this loading area. The proposed location of a loading area, the bin stores and the delivery servicing route are shown in Figure 1.
- 3.4.2** A private contractor will be collecting the refuse that the site generates using a Volvo FM300 vehicle. This vehicle has been tracked entering the turning/drop-off area, located on the south-eastern corner of the hotel, and then reversing back to the loading area. The loading area provides direct access to the bin store and the delivery route to the kitchen area which is located at the back of the hotel. The refuse vehicle has then been tracked pulling forwards away from the loading bay and back out of the site via the turning/drop-off area.
- 3.4.3** A 7.5t Box Van has also been tracked gaining access to the loading area and exiting the site in a forward gear. A 7.5t Box Van has been used as this is the vehicle that is expected to be used by Travelodge to make deliveries and collections. Swept path analysis of the loading area can be found in Appendix B.

3.5 Existing Pedestrian & Cycle Links

- 3.5.1** It is proposed that pedestrian/cycle links from the hotel will tie into existing links surrounding the north-west lake which in turn link into the rest of the cycle network serving the Bluewater Shopping Centre. There are approximately 4km of cycle paths within Bluewater. There are links between these cycle routes and National Cycle Network Route 1.
- 3.5.2** Cycle parking for the Bluewater centre is currently located adjacent to John Lewis, Marks & Spencer and House of Fraser.

4 Summary of Conclusions from Previous Transport Assessment

- 4.1.1** The previous TA was for a 180 bedroom hotel, including ancillary health fitness club and conference facilities. The current proposal is for a 110 bedroom hotel which will not have any conference or other facilities for hire.
- 4.1.2** The report concluded that the additional traffic generated by the development would have an imperceptible effect on existing highway conditions that would only increase flows on key links around the site by 1%. KCC agreed that the hotel would not have resulted in any significant additional traffic generation.
- 4.1.3** The location of the hotel is considered to be highly sustainable in view of the synergy that will exist between it and the existing retail and leisure facilities at Bluewater. This will mean that there will be a tendency for a high proportion of linked trips.
- 4.1.4** Bluewater already benefits from a high degree of accessibility by public transport. The hotel will be incorporated into the Bluewater Green Travel Plan which has already achieved a public transport share of 20% for employees and 12% for visitors.
- 4.1.5** The hotel site is already accessed by the Bluewater cycle network which provides a safe means of access around the site and links into the newly installed cycle routes to Greenhithe, Swanscombe, Bean and Stone.

5 Trip Generation

- 5.1.1** The TRICS database (Version 2011(b) v6.8.2) has been searched for Travelodge hotel sites similar to the proposed development. The most similar site is for a 120 bedroom Travelodge hotel situated within a leisure park in Cambridge. Details for this site, including trip rate information, are provided within Appendix C. We obtained a vehicular trip rate per bedroom and applied this to the proposed 110 bedrooms for the proposed development and the results are presented in Table 1 below.

Time Range	Arr.	Dep.	Total
07:00-08:00	10	23	33
08:00-09:00	7	17	24
09:00-10:00	7	10	17
10:00-11:00	6	6	12
11:00-12:00	6	11	17
12:00-13:00	4	4	7
13:00-14:00	4	7	11
14:00-15:00	2	1	3
15:00-16:00	4	5	8
16:00-17:00	6	7	14
17:00-18:00	6	2	8
18:00-19:00	13	3	16
19:00-20:00	6	3	8
Total	82	97	179

Table 1 – New Trip Generation

- 5.1.2** Table 2 shows the vehicular trip generation that was included in the previous TA for a 180 bedroom hotel that provides additional facilities such as conference facilities.

Time Range	Arr.	Dep.	Total
07:00-08:00	0	33	33
08:00-09:00	46	38	84
09:00-10:00	29	32	61
10:00-11:00	9	15	24
11:00-12:00	3	9	12
12:00-13:00	4	3	7
13:00-14:00	9	1	10
14:00-15:00	26	2	28
15:00-16:00	18	35	53
16:00-17:00	22	28	50
17:00-18:00	26	26	52
18:00-19:00	29	24	53
19:00-20:00	16	12	28
Total	237	258	495

Table 2 – Previous Transport Assessment Trip Generation

5.1.3 Table 3 shows the difference between the previous and new trip generation which shows that the new Travelodge site is likely to generate substantially less trips than the previously consented hotel. Across a 13 hour time period between 0700 – 2000 the proposed hotel is predicted to generate 316 less vehicular trips than the previously consented hotel. This large difference in trip generation can be attributed to the fact that the new development provides 70 less bedrooms and does not provide any additional facilities.

Time Range	Arr.	Dep.	Total
07:00-08:00	10	-10	0
08:00-09:00	-39	-22	-60
09:00-10:00	-22	-22	-44
10:00-11:00	-3	-10	-12
11:00-12:00	3	2	5
12:00-13:00	0	1	0
13:00-14:00	-5	6	1
14:00-15:00	-24	-1	-25
15:00-16:00	-14	-30	-45
16:00-17:00	-16	-21	-36
17:00-18:00	-20	-24	-44
18:00-19:00	-16	-21	-37
19:00-20:00	-11	-9	-20
Total	-155	-161	-316

Table 3 – Difference between Previous and New Trip Generation

5.1.4 The trip generation estimate confirms that the current proposal is likely to generate far less vehicular trips than predicted by the TA submitted in support of the previous, consented application.

Bluewater Hotel

Transport Statement

- 5.1.5** It is likely that the trip rates used, based upon the Cambridge site, will overestimate the impact of the proposed hotel on the external highway network, since the main intention of this hotel is to provide accommodation for people working at or attending the Bluewater exhibition venue. Without this facility on site these people would need to find accommodation outside of the site and would need to travel into the site, often by car, on a daily basis.

6 Summary and Conclusions

- 6.1.1** This Transport Statement has assessed the impacts of a 110 bed hotel at the land adjacent to North West Lake, Bluewater, Stone. The hotel will be operated by Travelodge and its main purpose will be to provide a local hotel for the use of people visiting Bluewater and in particular for those working or visiting the new exhibition venue at the centre.
- 6.1.2** This statement has addressed the transport requirements set out by Les Seaborn of Kent Highways Services in the comments made by Dartford Borough Council in response to the development proposals.
- 6.1.3** This statement has also detailed how the development proposals aims to meet national and local policy objectives by creating a hotel facility that can complement the existing Bluewater shopping centre and the soon to be completed Exhibition Centre.
- 6.1.4** The parking provision for cars, bus/coaches and cycles is within the conditions proposed by Les Seaborn.
- 6.1.5** Swept path analysis of the site has been undertaken to show that it is accessible to all of the expected vehicle types i.e. refuse and delivery vehicles.
- 6.1.6** The revised trip generation shows that the new Travelodge site is likely to generate substantially less trips than the previously consented hotel.

Bluewater Hotel
Transport Statement

Appendix A

Bluewater Hotel
Transport Statement

David Roach
GVA
10 Stratton Street
London
W1J 8JR

Please ask for: Paul Nicholls

Direct Line: (

Direct Fax: (

E-mail: [\[redacted\]](#)

DX: 142726 Dartford 7

Your Ref:

Our Ref: 11/00809/COUNT

Date: 23rd June 2011

Dear Mr. Roach,

RE: Erection of a hotel with up to 130 bedrooms at land adjacent to North West Lake, Bluewater, Stone.

I refer to the above and our meeting on 21st June 2011. I set out the main issues below:

Principle of Development

The expired outline permission of 2002 was judged against adopted Local Plan policies from 1995. If an application is to be submitted in the near future the same policies would apply, although I am mindful of the impending decision by the Planning Inspectorate in relation to the examination in public of the Council's Core Strategy Proposed Submission, which is likely to result in greater weight being given to the policies contained therein.

Bluewater is recognised in the Core Strategy Proposed Submission as having an established role as a high quality regional-level comparison shopping centre that is likely to experience considerable competitive pressures from new and expanding regional shopping centres in the near future. As an accepted driver for high quality developments in the area, the Council recognises the need for Bluewater to maintain its position relative to other regional centres and to continue to act as a driver for high quality developments in the near future, particularly at Ebbsfleet Valley.

Policy R2 of the Local Plan Review Second Deposit Draft 2004 also supports the provision of a hotel at Bluewater subject to it not exceeding the scale of the previously approved outline scheme. Any such application will also be judged against Policy EC10 of PPS4 (Planning for Sustainable Economic Growth).

With the subject site being similar to the previously approved outline scheme for a hotel with up to 180 bedrooms, I consider that the principle of developing this site for such a leisure use is acceptable and will complement the events centre. With proposed elevations being unavailable at the meeting it should be noted that the Council are keen to ensure that the final design of the hotel is of a quality that complements and builds upon the quality of Bluewater.

Siting

Given that this is similar to the previously approved application for a hotel, I have no objections to this. In my opinion the site appears to be the most suitable within the former quarry with it

being sufficiently separated from the confines of the main shopping centre, but at the same time having adequate pedestrian access through the park and around the lake. The Council may require details of a signage strategy to include references to the hotel from John Lewis (for the benefit of pedestrians) and throughout the road network (for vehicles).

Subject to the final design, I have no objections to either of the sketches that were presented at the meeting.

Highways

In general, Les Seaborn of Kent Highway Services confirmed that there would be no objections and no requirement for contributions, subject to a number of conditions:

- (1) The layout should include a suitable turning area close to the front for deliveries and for drop-offs;
- (2) Number of beds shall not exceed 130;
- (3) Number of car parking spaces shall not exceed 130;
- (4) The hotel is for overnight stays only and has no conference or other facilities for hire;
- (5) The hotel is considered to be ancillary to the shopping centre and the Events Venue;
- (6) Secure weatherproof parking should be provided for cyclists at the rate of 20% of the parking provision with room to be expanded if required;
- (7) The size of the coach park is not reduced below 20 parking spaces.

Sequential Test

The schedule of further minor proposed changes to the submission core strategy, as submitted in June 2011, referred to changes to Table 3 on page 60 (Role of Shopping Centres). Amongst these changes, 'hotel' is proposed to be added to the 'Services Provided'. As such the Council accepts the need and demand for a hotel at Bluewater and therefore does not require a sequential test as part of the submission.

Impact of Development on North West Lake

I have consulted the Environment Agency on the proposal and await their comments. I will forward their comments on to you as soon as they are received.

Validation Documents

Should you decide to proceed with an application, the following documents will need to accompany it:

- design and access statement;
- tree survey;
- parking plan with swept curves;
- transport statement.

In the circumstances I hope this is of assistance. Please do not hesitate to contact me should you require any further information. I would stress that the above information is an expression of officer opinion and will not prejudice or compromise the decision of the Council with regard to this or any other matter.

Yours faithfully,



Paul Nicholls
Senior Planner

Appendix B

Bluewater Hotel
Transport Statement

BDL

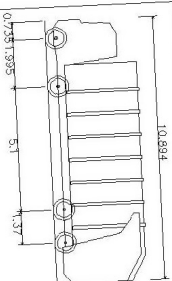
REFUSE VEHICLE ENTERING THE LOADING AREA

North Arrow

REFUSE VEHICLE EXITING THE LOADING AREA

80 L

85



VOLVO FM300 Series	10,894mm
Overall Length	2,500mm
Overall Width	3,751mm
Overall Body Height	0,304mm
Min Body Ground Clearance	2,500mm
Track Width	6,000 sec
Lock to Lock Time	11,050mm
Wall to Wall Turning Radius	

	Drawing	Date	Checked

[illegible]

BLUEWATER HOTEL, GREENHITHE
SWEEP PATH ANALYSIS

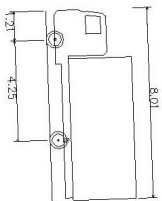
LOADING AREA
VOLVO FM300 SERIES REFUSE VEHICLE

Client
LEND LEASE

Date of the Issue	19.09.11		Drawn by	DJ
As Scaled	1:500	Checked by	Rp	
Drawing Number	25596/00/004		Revised	A

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Peter Brett Associates LLP
LONDON
Tel: 020 7025 7100

7.5t BOX VAN EXITING THE LOADING AREA



7.5t Box Van	8.010m
Overall Length	2.100m
Overall Width	3.556m
Overall Body Height	0.51m
Min Body Ground Clearance	2.064m
Track Width	4.00
Lock to Lock Time	4.00 sec
Kerb to Kerb Turning Radius	7.400m

Mark	Revision	Wiederholung	Wiederholung

SCALING NOTE: Do not scale from this drawing. If it could, ask.

UTILITIES NOTE: The position of any existing public or private sewer, utility service, plant or apparatus shown on this drawing is believed to be correct, but no warranty to this is expressed or implied. Other such plant or apparatus may also be present but not shown. The Contractor is therefore advised to undertake his own investigation when the presence of any existing sewer, service, plant or apparatus may affect the operations.

FOR INFORMATION

BLUEWATER HOTEL, GREENHITHE

SWEPT PATH ANALYSIS

LOADING AREA

7.5t BOX VAN

Client

LEND LEASE

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20	Q21	Q22	Q23	Q24	Q25	Q26	Q27	Q28	Q29	Q30	Q31	Q32	Q33	Q34	Q35	Q36	Q37	Q38	Q39	Q40	Q41	Q42	Q43	Q44	Q45	Q46	Q47	Q48	Q49	Q50	Q51	Q52	Q53	Q54	Q55	Q56	Q57	Q58	Q59	Q60	Q61	Q62	Q63	Q64	Q65	Q66	Q67	Q68	Q69	Q70	Q71	Q72	Q73	Q74	Q75	Q76	Q77	Q78	Q79	Q80	Q81	Q82	Q83	Q84	Q85	Q86	Q87	Q88	Q89	Q90	Q91	Q92	Q93	Q94	Q95	Q96	Q97	Q98	Q99	Q100
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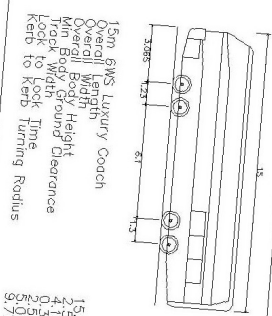
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References

25596/001/005

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FOR INFORMATION

BLUEWATER HOTEL
HOTEL COACH PARK
SWEPT PATH ANALYSIS
LUXURY 15m COACH - ENTERING
LEND LEASE

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Date of 1st Issue	31.10.11	Drawn by	DJ
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Drawing Number	25596/001/008	Revision	-

Appendix C

Bluewater Hotel
Transport Statement

Site Reference: CA-06-A-03 Multi-Modal Site
 Created: Version: 2010(a)v6.5.1 03/12/09
 Latitude/Longitude: 52.1901, 0.1365
 Land Use Type: 06 - HOTEL, FOOD & DRINK/A - HOTELS
 Region/Area: EAST ANGLIACAMBRIDGESHIRE
 Version/Creation Date: 2010(a)v6.5.1 03/12/09

Description: TRAVELODGE, CAMBRIDGE
 Street: CLIFTON WAY
 District: CAMBRIDGE LEISURE PARK
 Town: CAMBRIDGE
 Post Code: CB1 7DY

Location: Suburban Area (PPS6 Out of Centre)
 Location Sub Category: Built-Up Zone
 Use Class: C1

Population within 500m: 700
 Population within 1 Mile: 20,001 to 25,000
 Population within 5 Miles: 125,001 to 250,000
 Car ownership within 5 Miles: 1.1 to 1.5

Public Transport Provision Summary

Day	Period	Total buses/trams within 400m	Total Trains within 1000m	Total Services
Monday-Friday	0700-1900	624	296	920
Monday-Friday	0700-1000	126	62	188
Monday-Friday	1600-1900	180	78	258
Saturday	0700-1900	534	280	814
Sunday	0700-1900	206	192	398

Is site associated with a travel plan: No
 If not, are there any plans to implement
 a Travel Plan in the future? No
 Is survey data available before the
 implementation of the Travel Plan?
 Is the location of the site hilly or flat: Flat
 Urban Regeneration: Yes

Gross floor area: 3950 sqm
 Number of bedrooms: 120
 Total Employees: 36

No. of developments for this Site: 1
 No. of survey Days for this Site: 1

Comments

The site is in an area of urban regeneration and stands on a location which was previously a Cattle Market.
 The site is located off the A1307 which leads north into Cambridge city centre and south through the suburbs to the A11.
 Local roads lead in all directions.
 There are two pedestrian and one vehicle access point into the site.
 There are restaurants, a cinema, a car park, self storage, a park, residential developments and industrial developments in the surrounding area.

Bus (or tram) site accessibility

3. Is there at least 1 bus (or tram) stop within the site frontage or within 400m of the site frontage? : Yes
4. If yes to question 3, where it is necessary to cross a road between the development and the stop, is there a conveniently placed crossing facility? : Yes
5. If yes to question 3, are there at least 2 buses (or trams) per hour (per direction between 0700 and 1900) with routes serving significant areas of population within a 5 kilometre radius? (Mon-Sat): Yes
6. If yes to question 5, what are the service characteristics? (please complete the outline information below)

Destination (town/area)	Number per hour	Approx. journey time
Arbury	6	49
Bridewell Road	6	8
Milton	6	24
Cottenham	3	57

Rail accessibility

7. Is there at least one railway station within 1 kilometre radius of the site?: Yes
8. If yes to question 7, is pedestrian access to the station satisfactory?: Yes
9. If yes to question 7, are there at least 2 stopping trains per hour (per direction between 0700 and 1900) with routes serving stations within a 10 kilometre radius (Mon-Sat)?: Yes
10. If yes to question 9, what are the service characteristics? (please complete the outline information below)

Destination (town/area)	Number per hour	Approx. journey time
Stanstead Airport	2	34
Milton Keynes Central	2	130
Peterborough	4	16
London	3	80

11. Please enter general comments/views about the relevance, quality and importance of public transport services relating to this development.

There are numerous additional bus and rail services, the services listed in the tables are the most frequent services.

Design features encouraging non-car modes

12. Pedestrians

The site is within close proximity to local shops and restaurants.

13. Pedal cycles

There is cycle parking within the local leisure park and cycle lanes within the local area.

14. Public transport

The site is within close proximity to local bus routes and the railway station.

Accessibility & Census Information

Road Network Distance to Local Developments	
Year of Analysis	2009
Nearest Primary School	0.3 kilometres
Nearest Secondary School	0.8 kilometres
Nearest Local Shop/Corner Shop	0.2 kilometres
Nearest Main Supermarket	4.2 kilometres
Nearest Doctors Surgery	0.3 kilometres
Nearest Hospital with Minor Injuries/A & E	1.6 kilometres
Nearest Sports/Leisure Centre	0.3 kilometres

Census Data	
Year of Census	2001
Census Output Area/Data Zone	12UBFU0009
Number of people employed within Census Output Area	175
Number of households within Census Output Area	119
Number of people living within Census Output Area	331
Area of Census Output Area (hectares)	16.00
Population density within Census Output Area (per hectare)	21.14

SITE PHOTO



Site reference:	CA-06-A-03	Multi-Modal survey site
Trade name:	TRAVELODGE	
Site area (h/a):	0.11	
Gross floor area (sqm)	3950	
GFA not in use (sqm)	0	
Open since	2004	
Total Employees	36	
Full Time Employees	9 25%	
Part Time Employees	27 75%	
Approximate % of total employees working standard 9-5 hours or similar	0%	
Percentage Split of Employee Gender		
Male	25%	
Female	75%	
GFA per employee	109.722	
Number of bedrooms	120	
Name of nearest site	EXPRESS HOLIDAY INN	
Distance to nearest similar site	2 Km	

OPENING TIMES (24 Hour format)

Mon to Thurs	00:00	to	24:00
Friday	00:00	to	24:00
Saturday	00:00	to	24:00
Sunday	00:00	to	24:00

Conference Facilities: N

Comments

The site is open 24hrs a day.

Site reference: CA-06-A-03 Survey date: 16/10/09 Day of week: Friday

Multi-Modal survey site

Vehicles surveyed: Total vehicles

Survey type: Manual Count
 AM weather: Mild and Light Rain
 PM weather: Mild and Windy

Initial car park occupancy: 47 Final car park occupancy: 38

BRACKETED ACCUMULATION FIGURES ARE NOT ABSOLUTE

Data proportions in %

Motor cars	64	Motor cycles	0	Public service	0
Light goods	3	OGV (1)	4	OGV (2)	0
				Taxis	29

Time	Arrivals 104	Departures 113	Totals	Parking Accum
00:00-01:00				
01:00-02:00				
02:00-03:00				
03:00-04:00				
04:00-05:00				
05:00-06:00				
06:00-07:00				
07:00-08:00	11	25	36	33
08:00-09:00	8	18	26	23
09:00-10:00	8	11	19	20
10:00-11:00	7	6	13	21
11:00-12:00	7	12	19	16
12:00-13:00	4	4	8	16
13:00-14:00	4	8	12	12
14:00-15:00	2	1	3	13
15:00-16:00	4	5	9	12
16:00-17:00	7	8	15	11
17:00-18:00	7	2	9	16
18:00-19:00	14	3	17	27
19:00-20:00	6	3	9	30
20:00-21:00	6	2	8	34
21:00-22:00	9	5	14	38
22:00-23:00				
23:00-24:00				

Comments

No PSV's were recorded entering or exiting the site on the day of the survey.

A number of students were staying relatively long term at the hotel. There was also an event taking place at the leisure centre during the survey.

Site reference: CA-06-A-03

Survey date: 16/10/09

Day of week: Friday

Multi-Modal survey site

Vehicles surveyed: OGV

Data proportions in % OGV (1) 100 OGV (2) 0

1 occupant per OGV is assumed, and included in the vehicle occupants count

Time	Arrivals 4	Departures 4	Totals	Accumulation
00:00-01:00				
01:00-02:00				
02:00-03:00				
03:00-04:00				
04:00-05:00				
05:00-06:00				
06:00-07:00				
07:00-08:00	1	1	2	(0)
08:00-09:00	0	0	0	(0)
09:00-10:00	1	1	2	(0)
10:00-11:00	1	1	2	(0)
11:00-12:00	0	0	0	(0)
12:00-13:00	0	0	0	(0)
13:00-14:00	1	1	2	(0)
14:00-15:00	0	0	0	(0)
15:00-16:00	0	0	0	(0)
16:00-17:00	0	0	0	(0)
17:00-18:00	0	0	0	(0)
18:00-19:00	0	0	0	(0)
19:00-20:00	0	0	0	(0)
20:00-21:00	0	0	0	(0)
21:00-22:00	0	0	0	(0)
22:00-23:00				
23:00-24:00				

Site reference: CA-06-A-03

Survey date: 16/10/09

Day of week: Friday

Multi-Modal survey site

Vehicles surveyed: Taxis

Time	Arrivals 31	Departures 31	Totals	Accumulation
00:00-01:00				
01:00-02:00				
02:00-03:00				
03:00-04:00				
04:00-05:00				
05:00-06:00				
06:00-07:00				
07:00-08:00	3	3	6	(0)
08:00-09:00	5	5	10	(0)
09:00-10:00	4	4	8	(0)
10:00-11:00	1	1	2	(0)
11:00-12:00	3	3	6	(0)
12:00-13:00	0	0	0	(0)
13:00-14:00	2	2	4	(0)
14:00-15:00	0	0	0	(0)
15:00-16:00	3	2	5	(1)
16:00-17:00	3	4	7	(0)
17:00-18:00	1	1	2	(0)
18:00-19:00	2	2	4	(0)
19:00-20:00	1	1	2	(0)
20:00-21:00	2	2	4	(0)
21:00-22:00	1	1	2	(0)
22:00-23:00				
23:00-24:00				

Site reference: CA-06-A-03

Survey date: 16/10/09

Day of week: Friday

Multi-Modal survey site

Vehicles surveyed: Cycles

Time	Arrivals 7	Departures 9	Totals	Accumulation
00:00-01:00				
01:00-02:00				
02:00-03:00				
03:00-04:00				
04:00-05:00				
05:00-06:00				
06:00-07:00				
07:00-08:00	0	1	1	(-1)
08:00-09:00	2	1	3	(0)
09:00-10:00	2	0	2	(2)
10:00-11:00	2	1	3	(3)
11:00-12:00	1	2	3	(2)
12:00-13:00	0	0	0	(2)
13:00-14:00	0	3	3	(-1)
14:00-15:00	0	0	0	(-1)
15:00-16:00	0	0	0	(-1)
16:00-17:00	0	0	0	(-1)
17:00-18:00	0	0	0	(-1)
18:00-19:00	0	0	0	(-1)
19:00-20:00	0	1	1	(-2)
20:00-21:00	0	0	0	(-2)
21:00-22:00	0	0	0	(-2)
22:00-23:00				
23:00-24:00				

Day of week: Friday

Multi-Modal survey site

People Surveyed: Car/LGV/Motorcycle occupants

This count consists of car occupants, light goods vehicle occupants, motorcycle riders and OGV occupants

Taxi drivers and drivers of private vehicles picking up/dropping off passengers at the site are excluded from the count.

[illegible]

Site reference: CA-06-A-03

Survey date: 16/10/09

Day of week: Friday

Multi-Modal survey site

People Surveyed: Pedestrians

Time	Arrivals 190	Departures 253	Totals	Accumulation
00:00-01:00				
01:00-02:00				
02:00-03:00				
03:00-04:00				
04:00-05:00				
05:00-06:00				
06:00-07:00				
07:00-08:00	5	12	17	(-7)
08:00-09:00	11	39	50	(-35)
09:00-10:00	13	14	27	(-36)
10:00-11:00	2	21	23	(-55)
11:00-12:00	7	16	23	(-64)
12:00-13:00	5	8	13	(-67)
13:00-14:00	4	8	12	(-71)
14:00-15:00	2	5	7	(-74)
15:00-16:00	9	5	14	(-70)
16:00-17:00	2	14	16	(-82)
17:00-18:00	27	18	45	(-73)
18:00-19:00	16	38	54	(-95)
19:00-20:00	35	4	39	(-64)
20:00-21:00	32	39	71	(-71)
21:00-22:00	20	12	32	(-63)
22:00-23:00				
23:00-24:00				

Site reference: CA-06-A-03

Survey date: 16/10/09

Day of week: Friday

Multi-Modal survey site

People Surveyed: Public transport Users

Time	Arrivals 32	Departures 28	Totals	Accumulation
00:00-01:00				
01:00-02:00				
02:00-03:00				
03:00-04:00				
04:00-05:00				
05:00-06:00				
06:00-07:00				
07:00-08:00	0	8	8	(-8)
08:00-09:00	3	4	7	(-9)
09:00-10:00	2	4	6	(-11)
10:00-11:00	2	0	2	(-9)
11:00-12:00	1	2	3	(-10)
12:00-13:00	1	0	1	(-9)
13:00-14:00	1	5	6	(-13)
14:00-15:00	1	0	1	(-12)
15:00-16:00	5	2	7	(-9)
16:00-17:00	0	0	0	(-9)
17:00-18:00	2	3	5	(-10)
18:00-19:00	9	0	9	(-1)
19:00-20:00	1	0	1	(0)
20:00-21:00	4	0	4	(4)
21:00-22:00	0	0	0	(4)
22:00-23:00				
23:00-24:00				

Site reference: CA-06-A-03

Survey date: 16/10/09

Day of week: Friday

Multi-Modal survey site

People Surveyed: Bus/Tram Passengers

Time	Arrivals 9	Departures 13	Totals	Accumulation
00:00-01:00				
01:00-02:00				
02:00-03:00				
03:00-04:00				
04:00-05:00				
05:00-06:00				
06:00-07:00				
07:00-08:00	0	0	0	(0)
08:00-09:00	1	2	3	(-1)
09:00-10:00	0	2	2	(-3)
10:00-11:00	2	0	2	(-1)
11:00-12:00	0	1	1	(-2)
12:00-13:00	0	0	0	(-2)
13:00-14:00	0	3	3	(-5)
14:00-15:00	0	0	0	(-5)
15:00-16:00	3	2	5	(-4)
16:00-17:00	0	0	0	(-4)
17:00-18:00	0	3	3	(-7)
18:00-19:00	2	0	2	(-5)
19:00-20:00	1	0	1	(-4)
20:00-21:00	0	0	0	(-4)
21:00-22:00	0	0	0	(-4)
22:00-23:00				
23:00-24:00				

Site reference: CA-06-A-03

Survey date: 16/10/09

Day of week: Friday

Multi-Modal survey site

People Surveyed: Train Passengers

Time	Arrivals 23	Departures 15	Totals	Accumulation
00:00-01:00				
01:00-02:00				
02:00-03:00				
03:00-04:00				
04:00-05:00				
05:00-06:00				
06:00-07:00				
07:00-08:00	0	8	8	(-8)
08:00-09:00	2	2	4	(-8)
09:00-10:00	2	2	4	(-8)
10:00-11:00	0	0	0	(-8)
11:00-12:00	1	1	2	(-8)
12:00-13:00	1	0	1	(-7)
13:00-14:00	1	2	3	(-8)
14:00-15:00	1	0	1	(-7)
15:00-16:00	2	0	2	(-5)
16:00-17:00	0	0	0	(-5)
17:00-18:00	2	0	2	(-3)
18:00-19:00	7	0	7	(4)
19:00-20:00	0	0	0	(4)
20:00-21:00	4	0	4	(8)
21:00-22:00	0	0	0	(8)
22:00-23:00				
23:00-24:00				

Site reference: CA-06-A-03

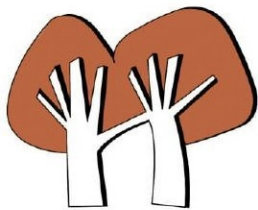
Survey date: 16/10/09

Day of week: Friday

Multi-Modal survey site

People Surveyed: Total people

Time	Arrivals 368	Departures 447	Totals	Accumulation
00:00-01:00				
01:00-02:00				
02:00-03:00				
03:00-04:00				
04:00-05:00				
05:00-06:00				
06:00-07:00				
07:00-08:00	12	66	78	(-54)
08:00-09:00	19	64	83	(-99)
09:00-10:00	21	37	58	(-115)
10:00-11:00	19	33	52	(-129)
11:00-12:00	17	31	48	(-143)
12:00-13:00	12	12	24	(-143)
13:00-14:00	6	25	31	(-162)
14:00-15:00	6	6	12	(-162)
15:00-16:00	17	15	32	(-160)
16:00-17:00	21	23	44	(-162)
17:00-18:00	39	24	63	(-147)
18:00-19:00	49	42	91	(-140)
19:00-20:00	44	11	55	(-107)
20:00-21:00	50	43	93	(-100)
21:00-22:00	36	15	51	(-79)
22:00-23:00				
23:00-24:00				



Landmark Trees

ARBORICULTURAL IMPACT ASSESSMENT REPORT:

Bluewater Hotel
Bluewater,
Greenhithe,
Kent DA9

REPORT PREPARED FOR:

Lend Lease,
C/o GVA Grimley Ltd,
10 Stratton Street,
London W1J 8JR

REPORT PREPARED BY

Adam Hollis
MSc ARB MICFor FArbor A MRICS C Env

Ref: GVA/BWH/AIA/01

Date: 12th September 2011

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London Office: 20 Broadwick Street, W1F 8HT, London

Registered Office: Grange Cottage, All Cannings, Devizes, Wiltshire, SN10 3NR

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Caveats

This report is primarily an arboricultural report. Whilst comments relating to matters involving built structures or soil data may appear, any opinion thus expressed should be viewed as qualified, and confirmation from an appropriately qualified professional sought. Such points are usually clearly identified within the body of the report.

It is not a full safety survey or subsidence risk assessment survey. These services can be provided but a further fee would be payable. Where matters of tree condition with a safety implication are noted during an inspection they will of course appear in the report.

Inherent in tree inspection is assessment of the risk associated with trees close to people and their property. Most human activities involve a degree of risk, such risks being commonly accepted if the associated benefits are perceived to be commensurate.

Risks associated with trees tend to increase with the age of the trees concerned, but so do many of the benefits. It will be appreciated, and deemed to be accepted by the client, that the formulation of recommendations for all management of trees will be guided by the cost-benefit analysis (in terms of amenity), of tree work that would remove all risk of tree related damage.

Prior to the commencement of any tree works, an ecological assessment of specific trees may be required to ascertain whether protected species (e.g. bats, badgers and invertebrates etc) may be affected.

Tree Constraints & Protection Overview

Client:	Lend Lease.	Case Ref:	GVA/BWH/AIA/01
Local Authority:	Dartford BC	Date:	12/9/11
Site Address: Bluewater Hotel, Bluewater, Greenhithe, Kent DA9			
Proposal: hotel development			
Report Checklist	Y/N		Y/N
Arboricultural constraints on site	Y	Trees removed	N
Tree Survey	Y	Topographical Survey	Y
BS5837 Report	Y	Conservation Area	N
Tree Preservation Orders	N		
Tree Protection Plan:	N/a	(include In future method statement)	
Tree Constraints Plan:	Y		
Arboricultural Impact Assessment:	Y		
Site Layout			
Site Visit	Y	Date: 31/08/11	Access Full/Partial/None F
Trees on Site	Y	Off site Trees	Y
Trees affected by development	Y	O/s trees affected by development	Y
Tree replacement proposed on plans:	N/a	On or off-site trees indirectly affected by development	Y
Trees with the potential to be affected			
Boundary poplar screen within parkland to south, likely to cause / be subject to post development conflict. Felling not essential, but recommended. Alternatively, screen could be thinned and pruned, especially if hotel footprint pulled back from boundary.			
Comments			
Numerous other trees in area to provide screening of complex.			
Recommendations			
1	Proposal will mean the loss of important trees (TPO/CA)		N
2	Proposal has sufficient amelioration for tree loss		N/a
3	Proposals provide adequate tree protection measures		Y
4	Proposal will mean retained trees are too close to buildings		N
5	Specialist demolition / construction techniques required		N
6	The Proposal will result in significant root damage to retained trees		N
7	Further investigation of tree condition recommended		N

RPA= Root Protection Area

TPP= Tree Protection Plan

AMS= Arboricultural Method Statement

AIA = Arboricultural Implication Assessment

BS5837: 2005 'Trees in relation to construction – recommendations'

1. SUMMARY

- 1.1 This report comprises an arboricultural impact assessment of the proposals for Bluewater Hotel, Bluewater, Greenhithe, Kent DA9, reviewing any conflicts between the proposals and material tree constraints identified in our survey.
- 1.2 There are 4 groups (G1-4) and 1 woodland (W1) surveyed on or around the site. W1 rates 'A' category *(High Quality), G1-3 rate 'B' category *(Moderate Quality) and G4 rates 'C' category *(Low Quality).
- 1.3 No significant primary impacts arise in the current proposals: there are no trees within the site interior, which is under concrete hard standing. Minimal rooting of trees is expected under the concrete apron. Some immediate, lower branch removal might be required of boundary poplars (G2) at the pinch points with the building. These would be small branches that could be removed without lasting injury.
- 1.4 Secondary impacts to the G2 poplars and to a lesser extent W1, are more likely, given the proximity of the trees to the building: poplar has a propensity to grow large and quickly, casting shade, dropping debris (including 25mm diameter branches), interfering with guttering and undermining foundations. Willow can also be a problematic species, but G3 is set further back from the immediate boundary and therefore more manageable.
- 1.5 Such post-development conflicts could be managed on an ad hoc basis through pruning (removal of lower branches) and selective felling, especially if the hotel footprint were withdrawn somewhat from the boundary. This option is (with or without footprint movement) is favoured for W1. However, the more pragmatic option for G2 would be removal while still semi-mature and to begin afresh, with more suitable, slower growing species. G2 is only a single row of trees amid a bulkier group of willows. Its removal should not be a significant impact in the landscape. W1 is bulky enough to allow some cropping at the edges without landscape impact.
- 1.6 Thus, the impacts of development are rated low and with suitable mitigation (pruning / replacement), the scheme is rated arboriculturally viable.

* British Standards Institute. 2005. Trees in Relation to Construction BS 5837: 2005 HMSO, London

2. INTRODUCTION

2.1 Terms of reference

- 2.1.1 LANDMARK TREES were asked by Lend Lease to undertake an arboricultural planning survey of the site: Bluewater Hotel, Bluewater, Greenhithe, Kent DA9. The report is to accompany a planning application.
- 2.1.2 The proposals are for the construction of a new hotel and this report will assess the impact on the trees and their constraints, identified in our survey. Although the proposals were known at the time of the survey, Landmark Trees endeavour to survey each site blind, working from a topographical survey, wherever possible, with the constraints plan informing their evolution.
- 2.1.3 I am a Registered Consultant and Fellow of the Arboricultural Association and a Chartered Forester, with a Masters Degree in Arboriculture and 20 years experience of the landscape industry - including the Forestry Commission and Agricultural Development and Advisory Service. I am a UK Registered Expert Witness, trained in single joint expert witness duties. I am also Chairman of the UK & I Regional Plant Appraisal Committee, inaugurated to promote international standards of valuation in arboriculture.

2.2 Drawings supplied

- 2.2.1 The drawings supplied by the client and relied upon by Landmark Trees in the formulation of our survey plans are:
- Topographical survey – ws191022*
- Proposed ground floor – Proposed Site Plan with Option F Rev D

*In the absence of a full topographical survey, tree positions may be approximate only.

2.3 Scope of survey

- 2.3.1 As Landmark Trees' arboricultural consultant, I surveyed the trees on site on 31st August 2011, recording relevant qualitative data in order to assess both their suitability for retention and their constraints upon the site, in accordance with British Standard 5837:2005 Trees in relation to construction – Recommendations [BS5837:2005].
- 2.3.2 Our survey of the trees, the soils and any other factors, is of a preliminary nature. The trees were inspected on the basis of the Visual Tree Assessment method expounded by Mattheck and Breloer (The Body Language of Trees, DoE booklet Research for Amenity Trees No. 4, 1994). I have not taken any samples for analysis and the trees were not climbed, but inspected from ground level.
- 2.3.3 The survey does not cover the arrangements that may be required in connection with the laying or removal of underground services.

2.4 Survey data & report layout

- 2.4.1 Detailed records of individual trees are given in the survey schedule in Appendix 1 to this report.
- 2.4.2 A site plan identifying the surveyed trees, based on the client's drawings / topographical survey is provided in Appendix 4.
- 2.4.3 This plan also serves as the Tree Constraints Plan with the theoretical Recommended Protection Areas (RPA's), tree canopies and shade constraints, (from BS5837: 2005) overlain onto it. These constraints are then overlain in turn onto the client's proposals to create an Arboricultural Impact Assessment Plan in Appendix 5. General observations and discussion follow, below.

3.0 OBSERVATIONS

3.1 Site description



ESCARPMENT PANORAMA

- 3.1.1 The site is an area of hard standing at the northern edge of the Bluewater estate, between the escarpment to the north and lakeside park to the south. It is currently laid to concrete hard standing and fenced off.
- 3.1.2 The site is relatively level.
- 3.1.3 In terms of the Soil Survey of England and Wales, the soil lies within the unsurveyed area of Greater London where the soils are generally, highly shrinkable clay; e.g. slowly permeable seasonally waterlogged fine loam over clay. Such soils are prone to compaction during development. Damage to soil structure can have a serious impact on tree health. Design of foundations near problematic tree species will also need to take into consideration subsidence risk. A structural engineer may be able to advise further on the local geology and its implications for development.

3.2 Subject trees

3.2.1 There are 4 groups (G1-4) and 1 woodland (W1) surveyed on or around the site. W1 rates 'A' category *(High Quality), G1-3 rate 'B' category *(Moderate Quality) and G4 rates 'C' category *(Low Quality).

3.2.2 In terms of age demographics there is a preponderance of early mature willow and poplar trees on the site with few mature trees in the population.

3.2.3 W1 is the key feature, part-predating, part regenerating since the initial development with a mix of broadleaved species of uneven age, including some early mature English oaks and hybrid poplars, surrounded by clumps of younger alder, birch and buddleia. There are no trees of significant, individual merit, but together the woodland belt softens the escarpment and frames the site.

3.2.4 G1-3 are uniform species groups of even age (semi-mature), comprising alder, hybrid poplar and willow. They are part of the parkland planting that frames the lake and potentially, screens the proposed hotel development. They are in robust health..

3.2.5 G4 is a more varied group of younger / smaller ornamental species, including specimen conifers. These species have fared less well on the artificial site and exhibit dieback, particularly around the more exposed play areas.

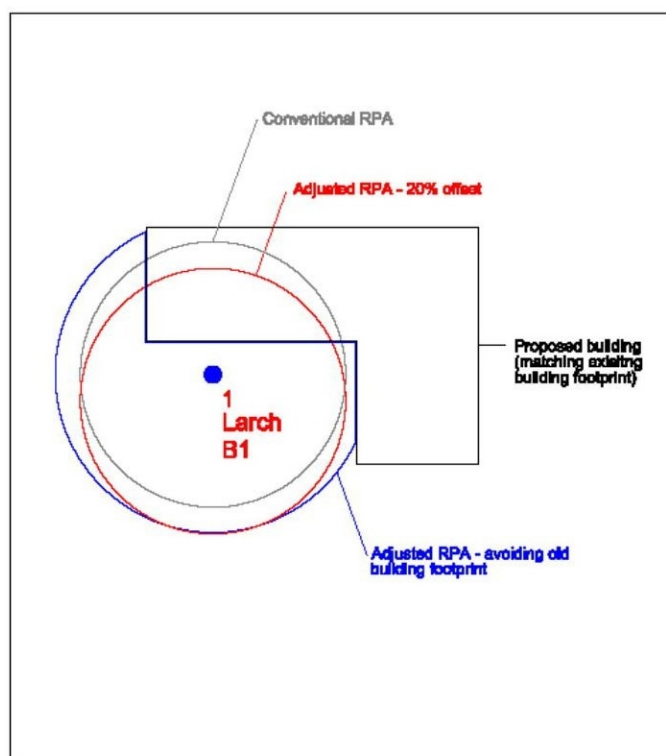
3.3 Planning Status

3.3.1 We are not aware of the existence of any Tree Preservation Orders or Conservation Areas, which may affect trees on the site. It is a criminal offence to disturb or damage such trees without permission from the local authority.

4.0 DEVELOPMENT CONSTRAINTS

4.1 Primary constraints

- 4.1.1 BS5837: 2005 gives Recommended Protection Areas (RPA's) for any given tree size. The individual RPA's are calculated in the Tree Schedule in Appendix 1 to this report, or rather the notional radius of that RPA, based on a circular protection zone. The prescribed radius is generally 12-x stem diameter at 1.5m above ground level, except where basal diameters are used in the case of multi-stemmed trees, and the radius is set at 10x the diameter.
- 4.1.2 Circular RPA's are appropriate for individual specimen trees grown freely such as these, but where there is ground disturbance, the morphology of the RPA can be modified to an alternative polygon, and where appropriate shifted 20% in the direction of undisturbed ground, as shown in the diagram below. In less fanciful terms, one needs to remember that RPA's are area-based and not linear. **No modifications have been made in this instance.**

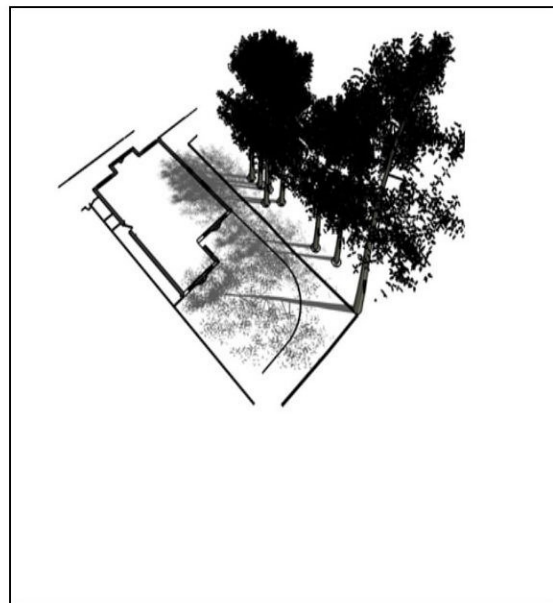


- 4.1.3 R Category trees are discounted from the process. Category-C trees would not normally constrain development individually, unless they provide some external screening function. As discrete, internal trees, their removal will not affect the wooded envelope that encloses much of the site.
- 4.1.4 "Care should be exercised over misplaced tree preservation. Attempts to retain too many or unsuitable trees on a site are liable to result in excessive pressure on the trees during development work and subsequent demands for their removal. The end result is usually fewer and less suitable trees than would be the case if proper planning, selection and conservation had been applied from the outset." (BS5837: 2005). **This consideration may well be applicable to the retention of G2 poplar screen.**

- 4.1.5 In this instance, there are no internal site trees and therefore few significant primary constraints upon development, provided it will not be necessary to build right up to the boundaries.

4.2 Secondary Constraints

4.2.1 The second type of constraint produced by trees that are to be retained is that the proximity of the proposed development to the trees should not threaten their future with ever increasing demands for tree surgery or felling to remove nuisance shading, honeydew deposition or perceived risk of harm.



4.2.3 The shading constraints are crudely determined from BS5837:2005 by drawing an arc from northwest to east of the stem base at a distance equal to the height of the tree, as shown in the diagram opposite. Shade is less of a constraint on non-residential developments, particularly where rooms are only ever temporarily occupied. This arc represents the effects that a tree will have on layout through shade, based on shadow patterns of 1x tree height for a period May to Sept inclusive 10.00-18.00 hrs daily.

4.2.4 The principal secondary constraint would be shading and organic deposition on to the site from trees along the south and west boundaries. Shading will always be a factor on this wooded site.

Note: Sections 5 & 6 will now assess the impacts upon constraints identified in Section 4. Table 1 in Section 5 presents the impacts in tabular form (drawing upon survey data presented in Appendices 1 & 2). Impacts are presented in terms of whole tree removal and the effect on the landscape or partial encroachment (% of RPA) and its effect on individual tree health. Section 6 discusses the table data, elaborating upon the impacts' significance and mitigation.

5.0

Table 1: Arboricultural Impact Assessment for Retained Trees

(Impacts assessed prior to mitigation and rated with reference to From Matheny & Cark (1998))

Hide irrelevant

Show All Trees

B.S. Cat.	Tree No.	Species	Impact	Tree / RPA Affected	Age	Growth Vitality	Species Tolerance	Impact on Tree Rating	Impact on Site Rating	Mitigation
B	G2	Poplar, Hybrid	Building Construction within Tree Canopy & Shadow	m ² N/A %	Semi-mature	Normal	N/A	N/A	Medium	Felling to Facilitate Development New planting / landscaping
A	W1	Mixed Broadleaves	Building Construction within Tree Shadow	m ² N/A %	Early Mature	Normal	N/A	N/A	Low	Remedial tree surgery (see Rec. Works) Dual aspect windows / strategic room layout

6.0 DISCUSSION

6.1 Rating of Primary Impacts

6.1.1 No significant primary impacts arise in the current proposals: there are no trees within the site interior, which is under concrete hard standing. Minimal rooting of trees is expected under the concrete apron. Some immediate, lower branch removal might be required of boundary poplars (G2) at the pinch points with the building. These would be small branches that could be removed without lasting injury.

6.1.2 The principal of RPA encroachment is established within BS5837:2005 and supported by the source document, National Joint Utilities Guidelines 10 / Vol. 4 1995 / 2010. NJUG introduced the x12 diameter *Precautionary Zone* for supervised working and *Prohibited Zone* at a universal 1m from the base of the tree. RPA's are frequently misinterpreted as *Root Prohibition Areas* – a **category error** on the part of those making this assumption. In logic, a category error occurs when someone acts as though an object had properties, which it does not or cannot have (QED).

6.1.3 An RPA encroachment of <20% of RPA may be considered as low impact, given the permissive references to 20% RPA relocation and impermeable paving within BS5837:2005 and other published references to healthy trees tolerating up to 30-50% root severance (Coder, Helliwell and Watson in CEH 2006). The trees in question are healthy specimens of species with a good resistance to development impacts, and quite capable of tolerating these low impacts.

6.2 Rating of Secondary impacts

- 6.2.1 Secondary impacts to the G2 poplars and to a lesser extent W1, are more likely, given the proximity of the trees to the building: poplar has a propensity to grow large and quickly, casting shade, dropping debris (including 25mm diameter branches), interfering with guttering and undermining foundations. Willow can also be a problematic species, but G3 is set further back from the immediate boundary and therefore more manageable.
- 6.2.2 The impact to G2 is likely to lead to at least, partial felling. However, given the groups position as a single-row planting within a wider wooded matrix of willows and mixed broadleaves, the landscape impact is rated low. W1 is bulky enough to allow some cropping at the edges without landscape impact.

6.3 Mitigation of Impacts

- 6.3.1 Such post-development conflicts could be managed on an ad hoc basis through pruning (removal of lower branches) and selective felling, especially if the hotel footprint were withdrawn somewhat from the boundary.
- 6.3.2 This option is (with or without footprint movement) is favoured for W1. However, the more pragmatic option for G2 would be removal while still semi-mature and to begin afresh, with more suitable, slower growing species. G2 is only a single row of trees amid a bulkier group of willows. Its removal should not be a significant impact in the landscape.
- 6.3.3 The foundations should be designed to accommodate the risk of tree-related ground movement, which may apply (subject to soil type). The client's structural engineers will offer further advice on the matter.

7.0 CONCLUSION

- 7.1 No significant primary impacts arise in the current proposals: there are no trees within the site interior, which is under concrete hard standing.
- 7.2 The species affected are generally tolerant of root disturbance / crown reduction and the retained trees are generally in good health and capable of sustaining these minimal impacts.
- 7.3 Secondary impacts to the G2 poplars and to a lesser extent W1, are more likely, given the proximity of the trees to the building.
- 7.4 Such post-development conflicts could be managed on an ad hoc basis through pruning (removal of lower branches) and selective felling, if the building were set back further from the boundary.
- 7.5 The more pragmatic option for the current layout, would be to remove G2 while still semi-mature and begin afresh with more suitable, slower growing
- 7.6 The trees that are recommended for felling are of little individual significance, such that their loss will not affect the visual character of the area
- 7.7 Therefore, the proposals will not have any significant impact on either the retained trees or wider landscape.

8.0 RECOMMENDATIONS

8.1 Specific Recommendations

- 8.1.1 Tree works recommendations are found in Appendix 2 to this report, with a selection of columnar tree species cultivars for constricted sites provided in Appendix 3. Any tree removals recommended within this report should only be carried out with local authority consent (where applicable).
- 8.1.2 Excavation and construction impacts within the RPA's of trees identified in Table 1 above, may need to be controlled by method statements specifying tree protection measures / fencing and by consultant supervision as necessary. These method statements can be provided as part of the discharge of conditions.
- 8.1.3 Replace G2 with 12 x native field maple (*Acer campestre* Louisa Red Shine) pit-planted at 3m centres as 14-16 cm girth nursery stock under current best practice; i.e. conforming to and planted in accordance with the following:

- BS 3936:1980 Nursery Stock;
- BS 4043:1966 Transplanting Semi-Mature Trees; and
- BS 5236:1975 Cultivation and Planting of Trees in the Advanced Nursery Stock Category.
- All replacement stock should be planted and maintained as detailed in BS 4428:1989 (Section 7): Recommendations for General Landscape Operations.

8.2 General Recommendations

- 8.2.1 Any trees which are in close proximity to buildings proposed for demolishing should be protected with a Tree Protection Barrier (TPB). This TPB should comprise steel, mesh panels 2.4m in height ('Heras') and should be mounted on a scaffolding frame (shown in Fig 2 of BS5837:2005). The position of the TPB can be shown on plan as part of the discharge of conditions, once the lay out is agreed with the planning authority. The TPB should be erected prior to commencement of works, remain in its original form on-site for the duration of works and removed only upon full completion of works.
- 8.2.2 A TPB may no longer be required during soft landscaping work but a full arboricultural assessment must be performed prior to the undertaking of any excavations within the RPA of a tree. This will inform a decision about the requirement of protection measures. It is important that all TPBs have permanent, weatherproof notices denying access to the RPA.
- 8.2.3 The use of heavy plant machinery for building demolition, removal of imported materials and grading of surfaces should take place in one operation. The necessary machinery should be located above the existing grade level and work away from any retained trees. This will ensure that any spoil is removed from the RPAs. It is vital that the original soil level is not lowered as this is likely to cause damage to the shallow root systems.
- 8.2.4 Any pruning works must be in accordance with British Standard 3998:2010 Tree work [BS3998].
- 8.2.5 Where sections of hard surfacing are proposed in close proximity to trees, it is recommended that "No-Dig" surfacing be employed in accordance with BS5837:2005 and 'The Principles of Arboricultural Practice: Note 1, Driveways Close to Trees, AAIS 1996 [APN1]'.

- 8.2.6 Where scaffolding installation is required within the RPA the provisions of Figure 3 of BS5837:2005 with regard to ground protection must be employed.
- 8.2.7 If the RPA of a tree is encroached by underground service routes then BS5837:2005 and NJUG VOLUME 4 provisions should be employed. If it is deemed necessary, further arboricultural advice must be sought.
- 8.2.8 Numerous site activities are potentially damaging to trees e.g. parking, material storage, the use of plant machinery and all other sources of soil compaction. In operating plant, particular care is required to ensure that the operational arcs of excavation and lifting machinery, including their loads, do not physically damage trees when in use.

- 8.2.9 To enable the successful integration of the proposal with the retained trees, the following points will need to be taken into account:
- 1) Plan of underground services.
 - 2) Schedule of tree protection measures, including the management of harmful substances.
 - 3) Method statements for constructional variations regarding tree proximity (e.g. foundations, surfacing and scaffolding).
 - 4) Site logistics plan to include storage, plant parking/stationing and materials handling.
 - 5) Tree works: felling, required pruning and new planting. All works must be carried out by a competent arborist in accordance with BS3998.

- 6) Site supervision: the Site Agent must be nominated to be responsible for all arboricultural matters on site. This person must:
- * be present on site for the majority of the time
 - * be aware of the arboricultural responsibilities
 - * have the authority to stop work that is causing, or may cause harm to any tree
 - * ensure all site operatives are aware of their responsibilities to the trees on site and the consequences of a failure to observe these responsibilities.
 - * make immediate contact with the local authority and/or a retained arboriculturalist in the event of any tree related problems occurring.
- 8.2.10 These points can be resolved and approved through consultation with the planning authority via their Arboricultural Officer.
- 8.2.11 The sequence of works should be as follows:
- * initial tree works: felling, stump grinding and pruning for working clearances
 - * installation of TPB for demolition & construction
 - * installation of underground services
 - * installation of ground protection
 - * main construction
 - * removal of TPB
 - * soft landscaping

9.0 REFERENCES

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- Barlow JF & Harrison G. 1999. Shade By Trees, Arboricultural Practice Note 5, AAIS, Farnham, Surrey.
- Lonsdale D 1999. Research for Amenity Trees No.7: Principles of Tree Hazard Assessment and Management, HMSO, London.
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- Thomas P, 2000. Trees: Their Natural History, Cambridge University Press, Cambridge.

APPENDIX 1

TREE SCHEDULE - Notes for Guidance

Dm -	is the diameter of the trunk in millimetres at 1.5m above ground level.
Spread -	is in metres at the points of the compass relevant to the woodland boundary
Class/Colour -	refers to the retention classifications in Section 5.2 BS5837: 2005 and colouring on the site map - Highly High Quality (A) (Green), Moderate Quality (B) (Blue), Low Quality (C) (Grey), Poor Quality (R) (Red)

BS5837 Tree Constraints Survey Schedule

Site: Bluewater Hotel

Date: 31/8/11

Surveyor(s): Adam Hollis

Ref:

Tree No.	English Name	Height	Crown Spread	Ground Clearance	Age Class	Stem Diameter	Protection Multiplier	Protection Radius	Growth Vitality	Structural Condition	Landscape Contribution	B.S. Cat	Sub Cat	Useful Life	Observations
G1	Willow, White	15	2	3	Semi-mature	200	12	2.4	Normal	Good	Medium	B	2	>40	
G2	Poplar, Hybrid	20	3	3	Semi-mature	300	12	3.6	Normal	Good	Medium	B	2	>40	
G3	Alder	10	3	3	Semi-mature	200	12	2.4	Normal	Fair	Low	B	2	>40	
G4	Mixed Broadleaves	5	1	2	Young	100	12	1.2	Moderate	Good	Low	C	2	>40	Some failures at east end. could cause potential hazard near play area
W1	Mixed Broadleaves	15	3	3	Early Mature	300	12	3.6	Normal	Good	High	A	2	>40	Oak, ash hazel woodland with birch, poplar and buddleia mixed in.

Notes:

1. Height describes the approximate height of the tree measured in meters from ground level.
2. The Crown Spread refers to the crown radius in meters from the stem centre and is expressed as an average of NSEW aspect if symmetrical.
3. Ground Clearance is the height in meters of crown clearance above adjacent ground level.
4. Stem Diameter is the diameter of the stem measured in millimeters at 1.5m from ground level for single stemmed trees or at ground level for multi-stemmed trees. Stem Diameter may be estimated where access is restricted.
5. Protection Multiplier is 12 for single stemmed and 10 for multi-stemmed trees and is the number used to calculate the tree's protection radius and area.

6. Protection Radius is a radial distance measured from the trunk centre.
7. Growth Vitality - Normal growth, Moderate (below normal), Poor (sparse/weak), Dead (dead or dying tree).
8. Structural Condition - Good (no or only minor defects), Fair (remediable defects), Poor - Major defects present.
9. Landscape Contribution - High (prominent landscape feature), Medium (visible in landscape), Low (secluded/among other trees).
10. B.S. Cat refers to (British Standard 5837:2005 Table 1) and refers to tree/group quality and value; 'A' - High, 'B' - Moderate, 'C' - Low, 'R' - Remove.
11. Sub Cat refers to the retention criteria values where 1 is Arboricultural, 2 is Landscape and 3 is Cultural including Conservational, Historic and Commemorative.
12. Useful Life is the tree's estimated remaining contribution in years.

APPENDIX 2RECOMMENDED TREE WORKS

Recommended Tree Works

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Show All Trees

Site: Bluewater Hotel

Surveyor(s): Adam Hollis

Date: 31/8/11

Ref:

Page

Tree No.	English Name	Height	Stem Diameter	Crown Spread	Recommended Works	Comments/ Reasons
G2	Poplar, Hybrid	20	300	3	(S) Fell Fell whole group or strategic individuals at pinchpoints (TBC with LPA)	Recommended to permit development
G4	Mixed Broadleaves	5	100	1	SFell Remove / replcae failures	Some failures at east end. could cause potential hazard near play area Advisable for good arboricultural practice
W1	Mixed Broadleaves	15	300	3	SFell Coppice boundary trees near footprint to improve future juxtaposition	Oak, ash hazel woodland with birch, poplar and buddleia mixed in. Recommended to permit development

Notes:

- CB - Cut Back to boundary/clear from structure.
- CL# - Crown Lift to given height in meters.
- CT#% - Crown Thinning by identified %.
- CCL - Crown Clean (remove deadwood/crossing and hazardous branches and stubs).
- CR#% - Crown Reduce by given maximum % (of outermost branch & twig length)
- DWD - Remove deadwood.
- Fell - Fell to ground level.
- FInv - Further Investigation (generally with decay detection equipment).
- Pol - Pollard or re-pollard.
- Mon - Monitor ongoing condition (annually by staff / owners & every 2-3 yrs by consultant).
- Svr Ivy / Clr Bs - Sever ivy / clear base and re-inspect base / stem for concealed defects.

APPENDIX 3: TREE SELECTION FOR CONSTRICTED SITES

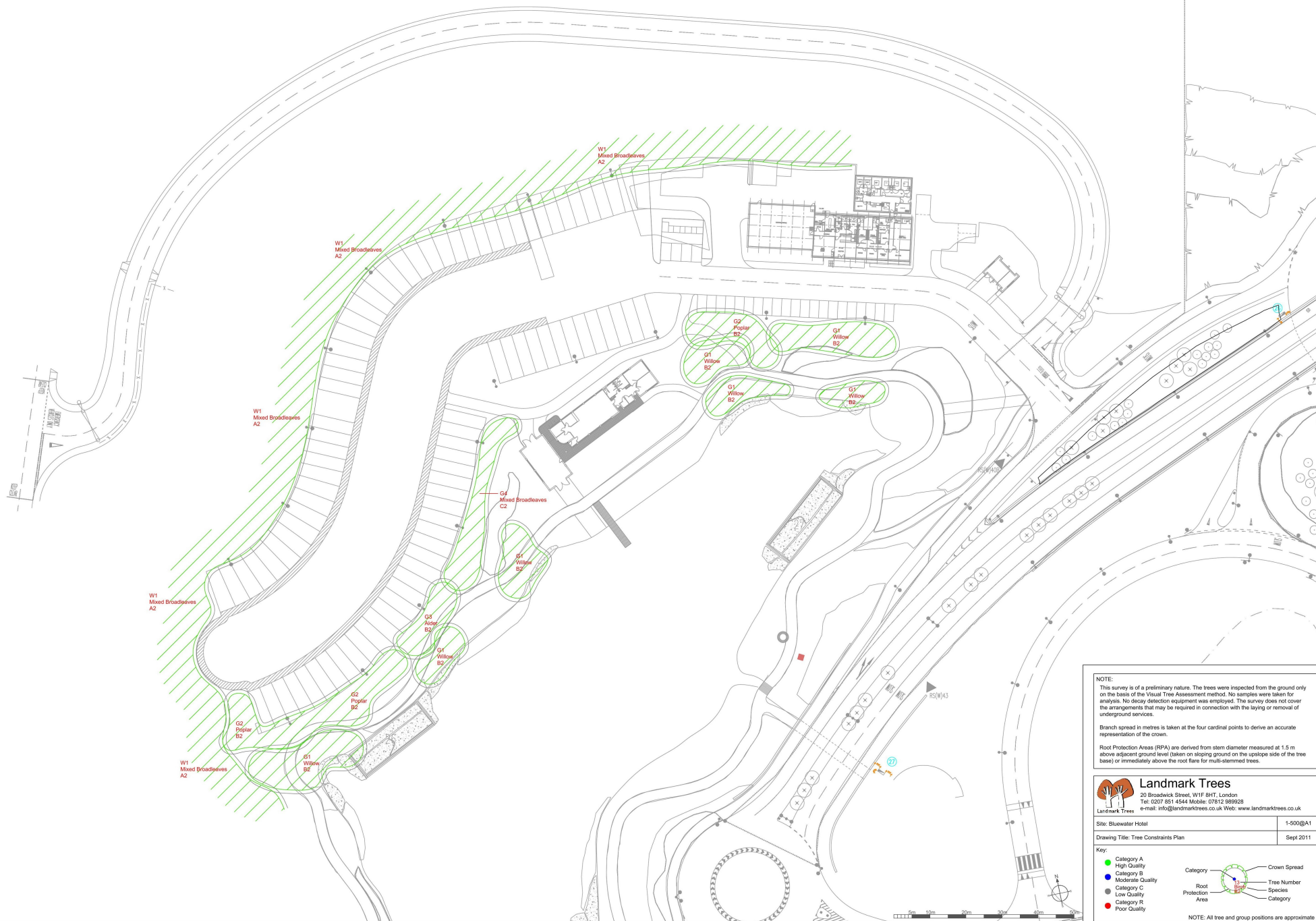
Table 4: Rosaceous Tree Species for Constricted Planting Sites

Common Name	Species	Selected Form
Hawthorn	<i>Crataegus monogyna</i>	Stricta
Cockspur	<i>Crataegus prunifolia</i>	Splendens
Cherry	<i>Prunus x hillieri</i>	Spire
Bird cherry	<i>Prunus padus</i>	Albertii
Rowan / Mountain ash	<i>Sorbus aucuparia</i>	Cardinal Royal
Rowan / Mountain ash	<i>Sorbus aucuparia</i>	Rossica Major
Rowan / Mountain ash	<i>Sorbus aucuparia</i>	Sheerwater Seedling
Swedish whitebeam	<i>Sorbus intermedia</i>	Brouwers
Bastard whitebeam	<i>Sorbus x thuringiaca</i>	Fastigiata

Table 5: Specimen Tree Species for Constricted Planting Sites

Common Name	Species	Selected Form
Chinese red bark birch	<i>Betula albosinensis</i>	Fascination
Swedish birch	<i>Betula pendula</i>	Dalecarlica
Hornbeam	<i>Carpinus betulus</i>	Fastigiata Frans Fontaine
Turkish Hazel	<i>Corylus colurna</i>	
Maidenhair tree	<i>Ginkgo biloba</i>	
Pride of India	<i>Koelreuteria paniculata</i>	Fastigiata
European larch	<i>Larix decidua</i>	Sheerwater Seedling
Tulip tree	<i>Liriodendron tulipifera</i>	Fastigiata

APPENDIX 4TREE CONSTRAINTS PLAN



NOTE:
This survey is of a preliminary nature. The trees were inspected from the ground only on the basis of the Visual Tree Assessment method. No samples were taken for analysis. No decay detection equipment was employed. The survey does not cover the arrangements that may be required in connection with the laying or removal of underground services.
Branch spread in metres is taken at the four cardinal points to derive an accurate representation of the crown.
Root Protection Areas (RPA) are derived from stem diameter measured at 1.5 m above adjacent ground level (taken on sloping ground on the upslope side of the tree base) or immediately above the root flare for multi-stemmed trees.

**Landmark Trees**
20 Broadwick Street, W1F 8HT, London
Tel: 0207 851 4544 Mobile: 07812 989928
e-mail: info@landmarktrees.co.uk Web: www.landmarktrees.co.uk

Site: Bluewater Hotel	1-500QA1
Drawing Title: Tree Constraints Plan	
Sept 2011	

Key:

- Category A High Quality
- Category B Moderate Quality
- Category C Low Quality
- Category R Poor Quality

Root Protection Area

Crown Spread

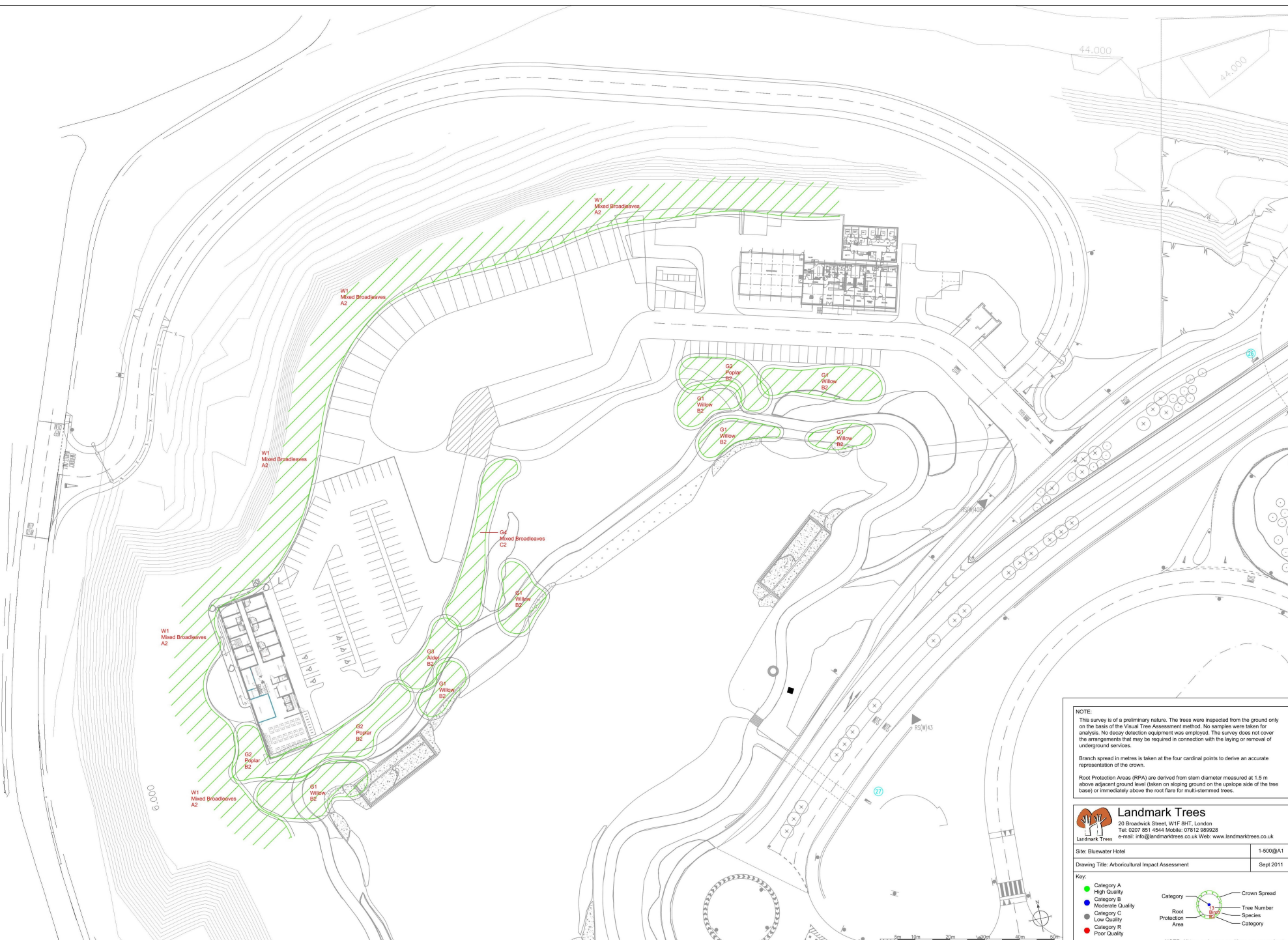
Tree Number

Species

Category

NOTE: All tree and group positions are approximate

APPENDIX 5ARBORICULTURAL IMPACT ASSESSMENT PLAN



NOTE:
This survey is of a preliminary nature. The trees were inspected from the ground only on the basis of the Visual Tree Assessment method. No samples were taken for analysis. No decay detection equipment was employed. The survey does not cover the arrangements that may be required in connection with the laying or removal of underground services.
Branch spread in metres is taken at the four cardinal points to derive an accurate representation of the crown.
Root Protection Areas (RPA) are derived from stem diameter measured at 1.5 m above adjacent ground level (taken on sloping ground on the upslope side of the tree base) or immediately above the root flare for multi-stemmed trees.



Landmark Trees
20 Broadwick Street, W1F 8HT, London
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e-mail: info@landmarktrees.co.uk Web: www.landmarktrees.co.uk

Site: Bluewater Hotel	1-500Q/A1
Drawing Title: Arboricultural Impact Assessment	
Sept 2011	

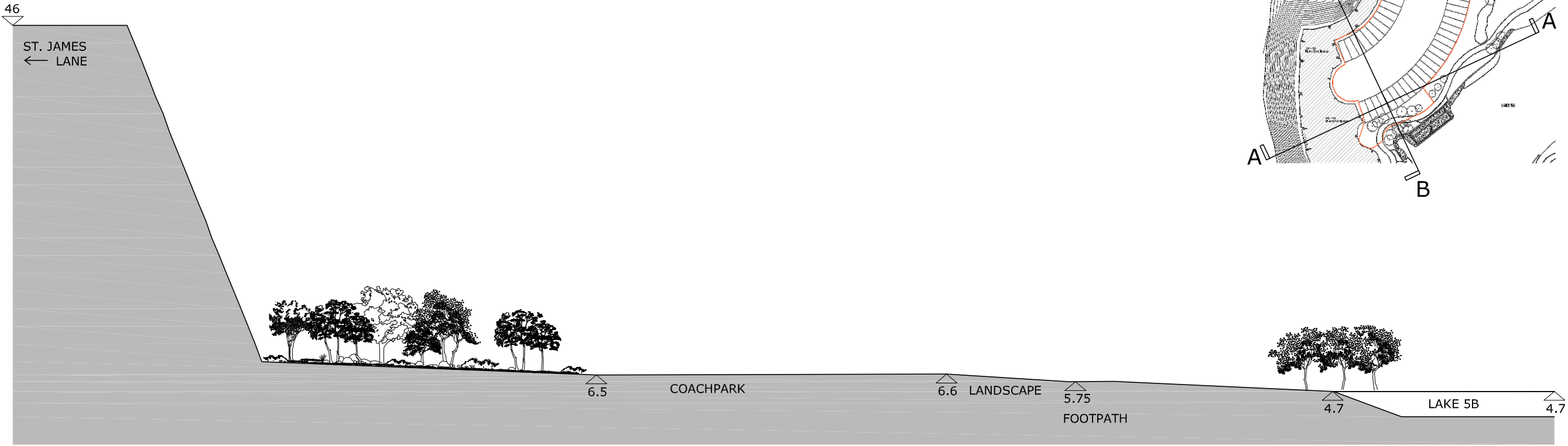
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- Category B Moderate Quality
- Category C Low Quality
- Category R Poor Quality

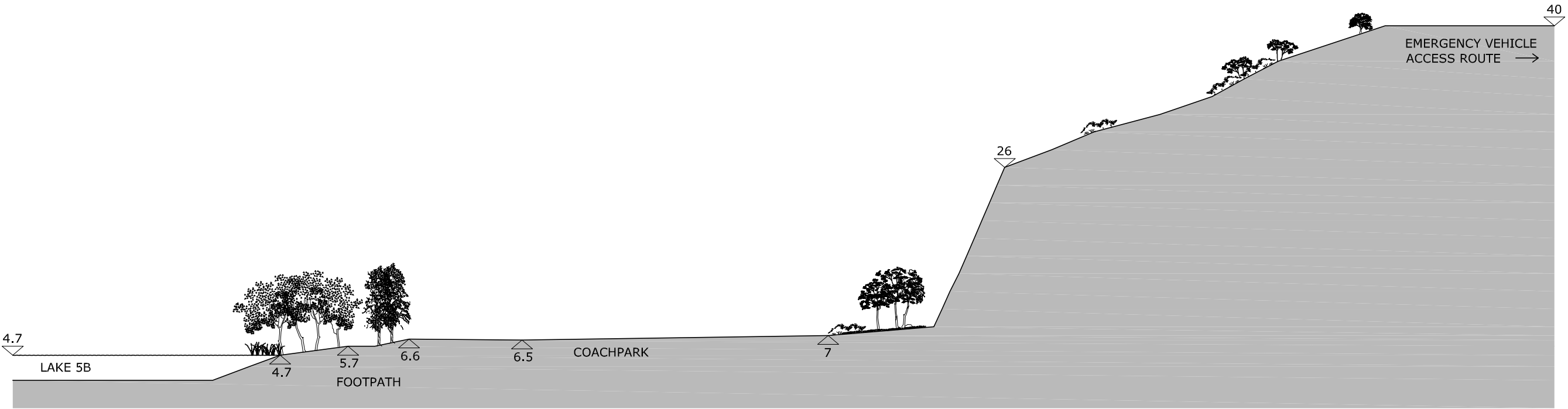
Legend:

- Tree Number
- Crown Spread
- Root Protection Area
- Category

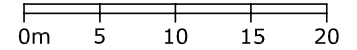
NOTE: All tree and group positions are approximate



SECTION A-A



SECTION B-B



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PROJECT
HOTEL BLUEWATER

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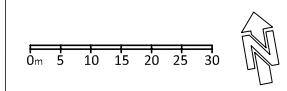
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LEGEND

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-  WOODLAND (UNSURVEYED)
-  DEVELOPMENT OUTLINE
-  EXISTING TREES

NOTES:

Building footprint and parking layout shown on site plan drawing (September 1996) provided by Waterman Partnership Consulting Engineers



A 16/12/11 1st Issue

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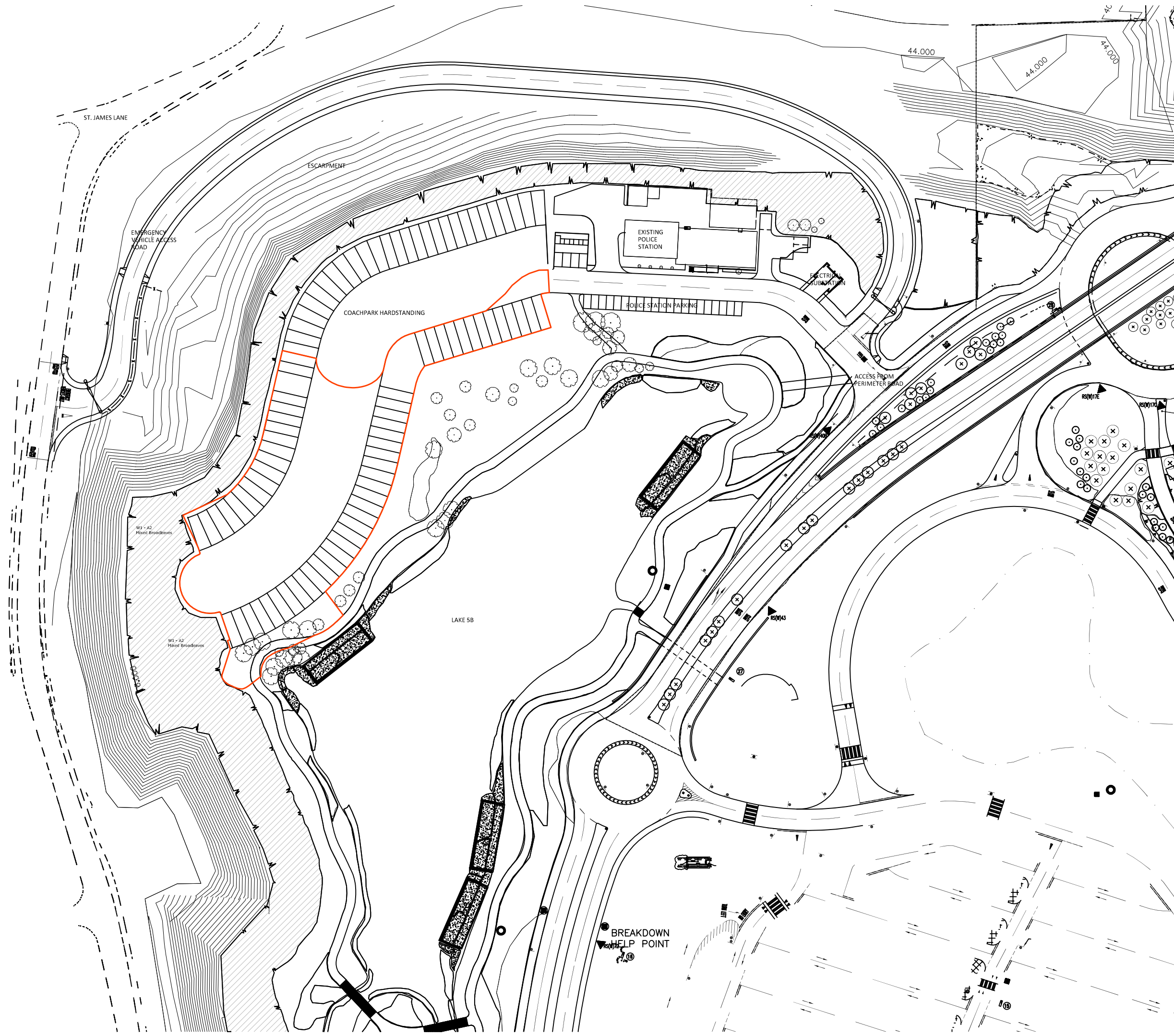
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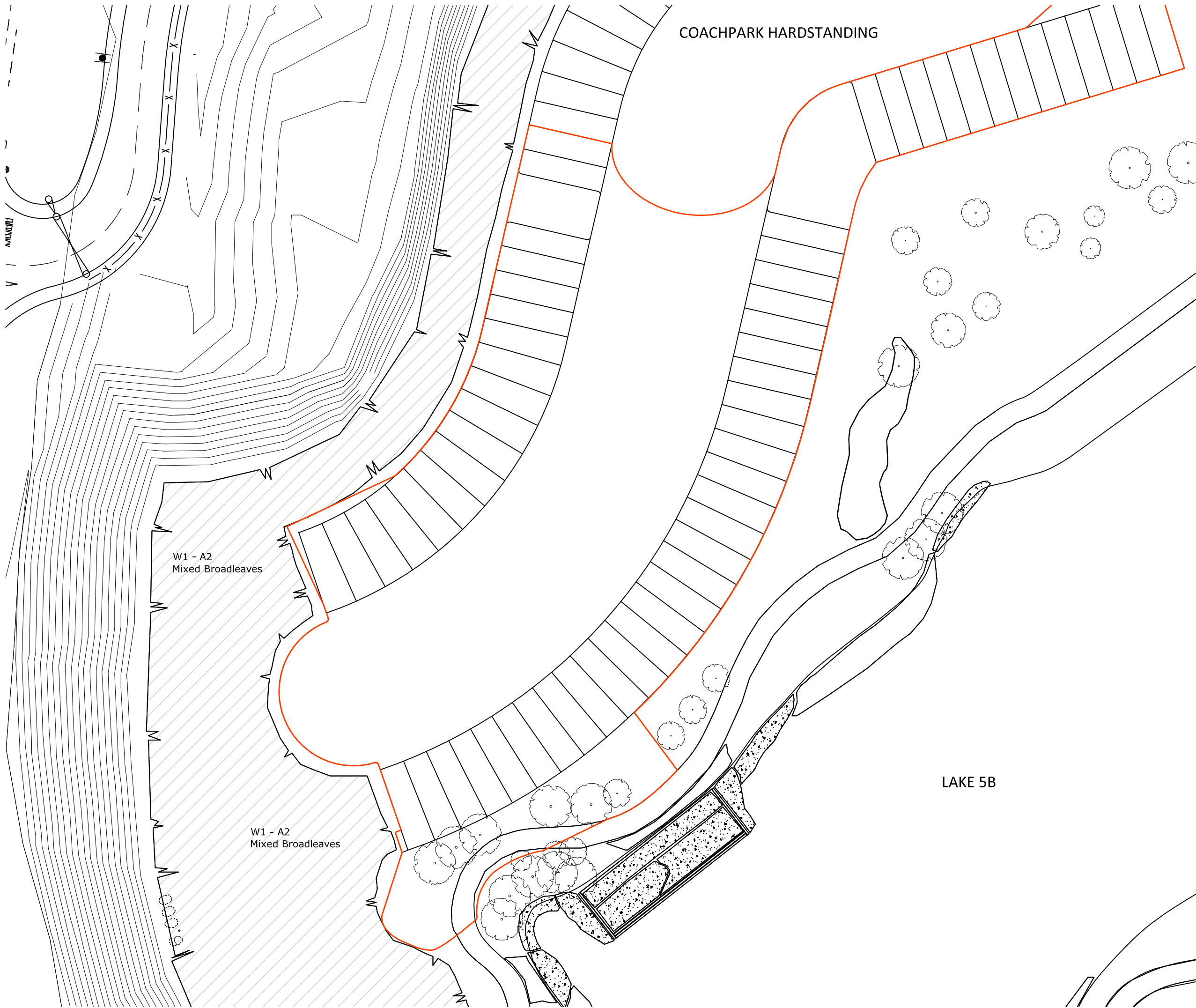
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telephone + 44 (0) 20 7841 7202
www.juicearchitects.com, studio@juicearchitects.com

LEGEND

- REED BEDS
- WOODLAND (UNSURVEYED)
- DEVELOPMENT OUTLINE
- EXISTING TREES

NOTES:

Building footprint and parking layout shown on site plan drawing (September 1996) provided by Waterman Partnership Consulting Engineers

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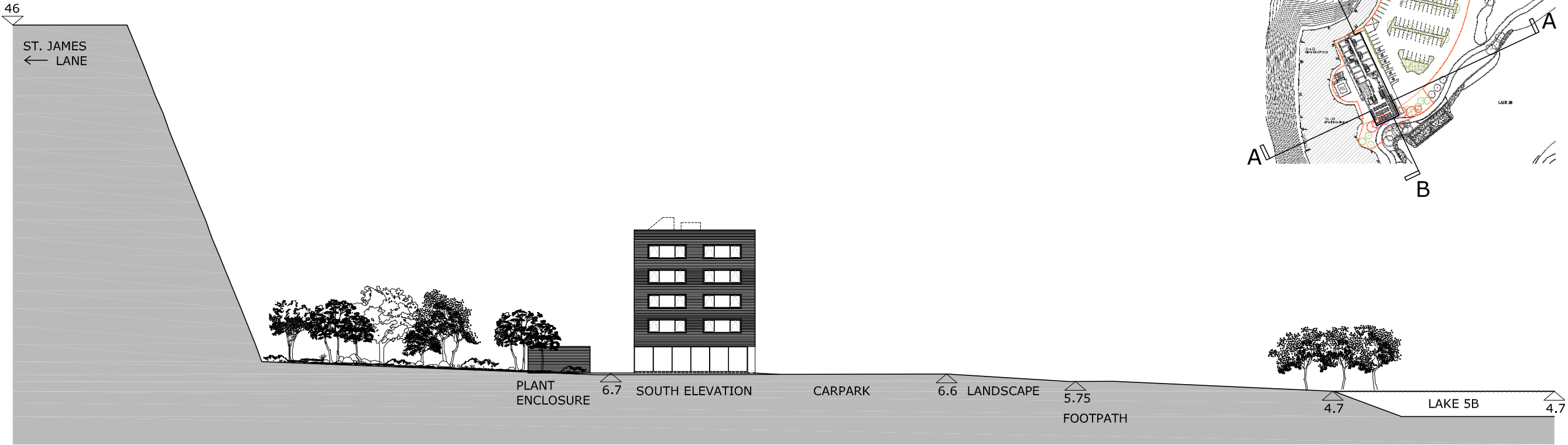
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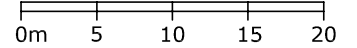
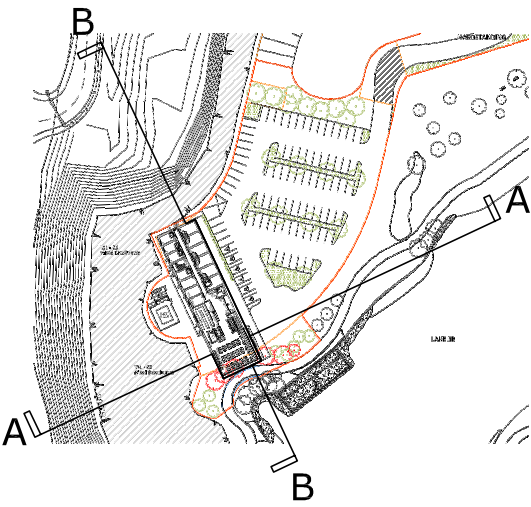
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SECTION A-A



SECTION B-B



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NOTES:

- 1 - Horizontal timber rainscreen cladding
- 2 - Facing Brickwork
- 3 - Through colour render
- 4 - Full height glazing
- 5 - Clear glazing with opaque spandrel panels behind partial horizontal timber rail cladding
- 6 - Top Hung Clear glazing restricted opening windows
- 7 - Opaque panels
- 8 - Extract louvres
- 9 - Box window surround
- 10 - Projecting box window brlse solell
- 11 - Engineering brick blue
- 12 - Entrance glazing & doors
- 13 - External quality timber painted doors
- 14 - Entrance canopy/soffit
- 15 - Opaque windows
- 16 - Brushed aluminum faced external quality timber door

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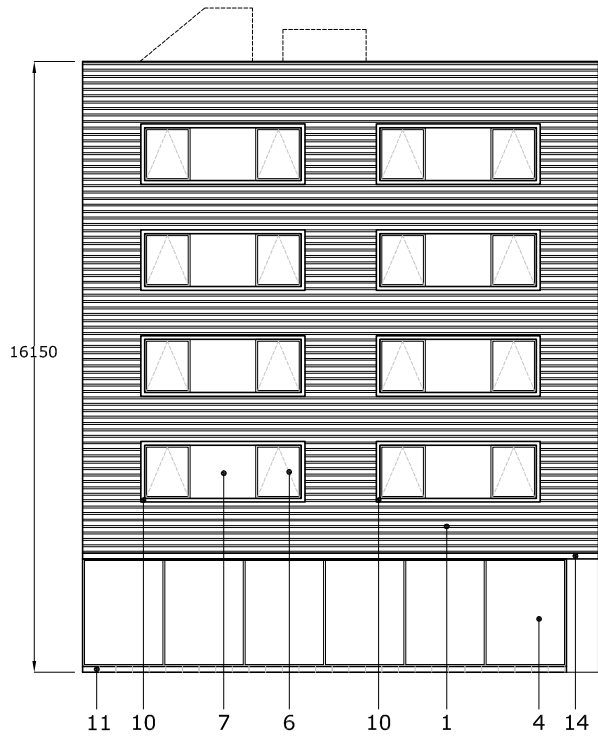
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DRAWING TITLE
PROPOSED ELEVATIONS

DATE 16/12/11	DRAWING NO. P1012	REVISION A
SCALE 1:200 @ A3		
JOB NO. 1228		

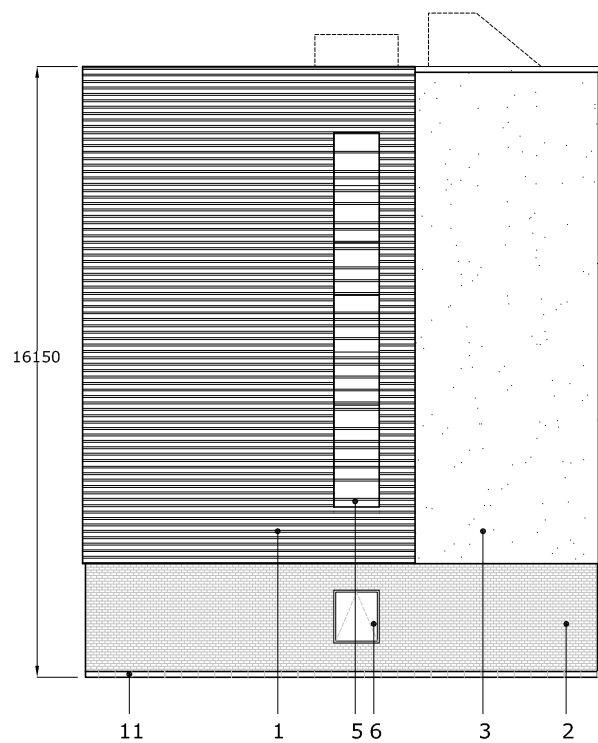
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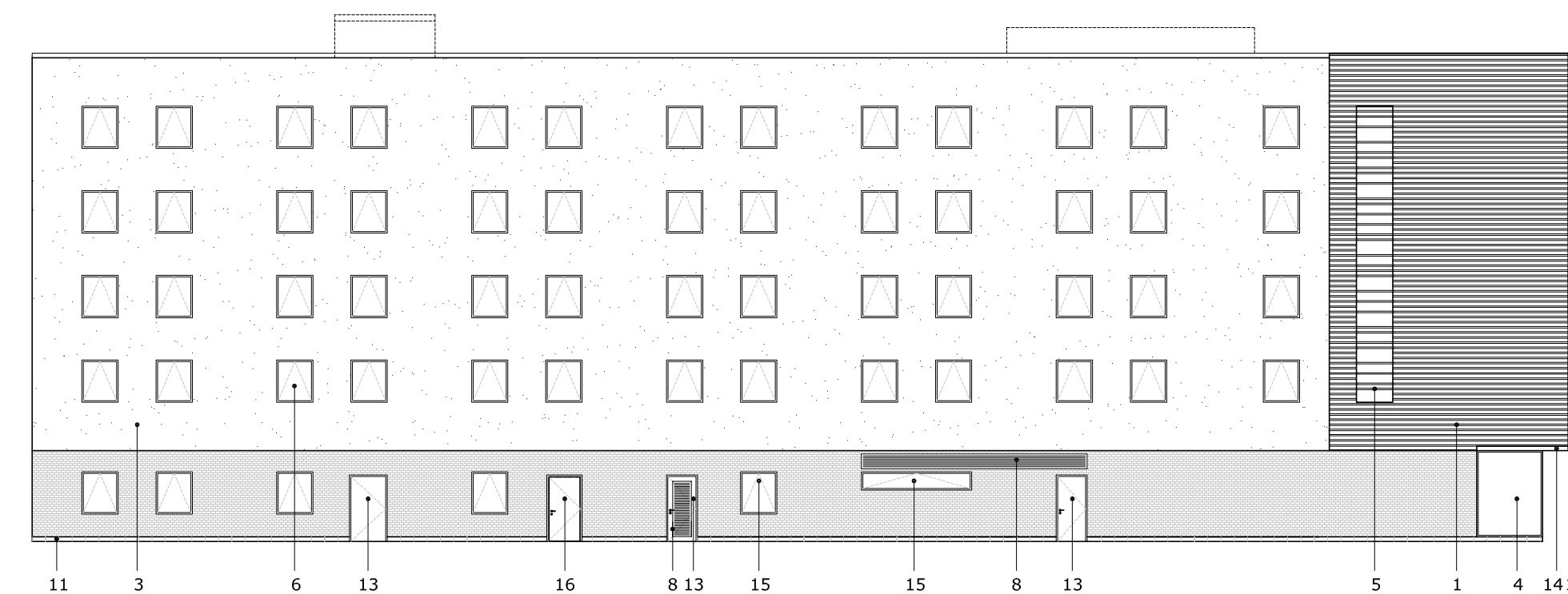
SOUTH ELEVATION



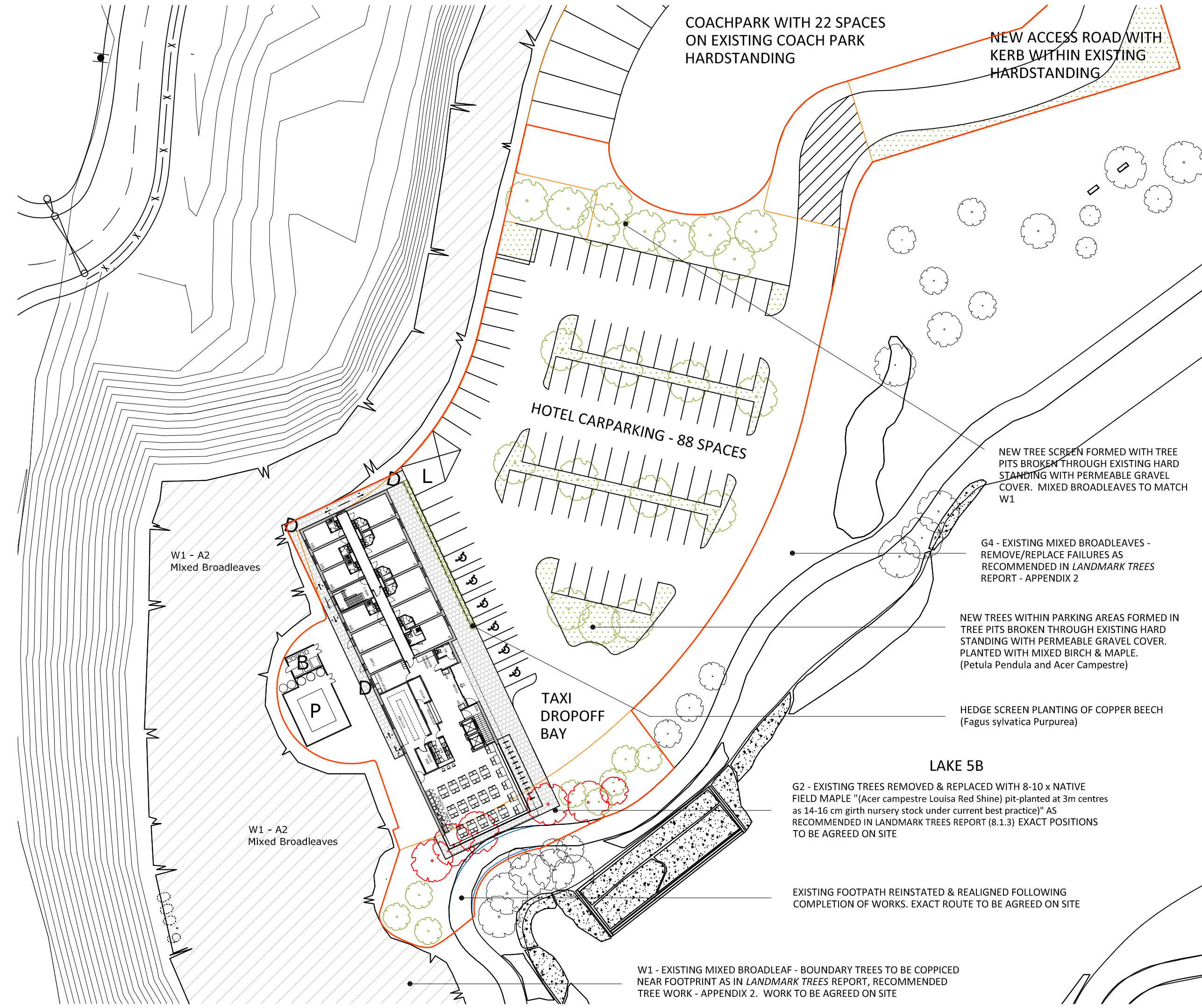
EAST ELEVATION



NORTH ELEVATION



WEST ELEVATION



COACHPARK WITH 22 SPACES
ON EXISTING COACH PARK
HARDSTANDING

NEW ACCESS ROAD WITH
KERB WITHIN EXISTING
HARDSTANDING

HOTEL CARPARKING - 88 SPACES

TAXI
DROPOFF
BAY

LAKE 5B

W1 - A2
Mixed Broadleaves

W1 - A2
Mixed Broadleaves

W1 - EXISTING MIXED BROADLEAF - BOUNDARY TREES TO BE COPPICED
NEAR FOOTPRINT AS IN LANDMARK TREES REPORT, RECOMMENDED
TREE WORK - APPENDIX 2. WORK TO BE AGREED ON SITE

G2 - EXISTING TREES REMOVED & REPLACED WITH 8-10 x NATIVE
FIELD MAPLE "(Acer campestre Louisa Red Shine) pit-planted at 3m centres
as 14-16 cm girth nursery stock under current best practice)" AS
RECOMMENDED IN LANDMARK TREES REPORT (8.1.3) EXACT POSITIONS
TO BE AGREED ON SITE

G4 - EXISTING MIXED BROADLEAVES -
REMOVE/REPLACE FAILURES AS
RECOMMENDED IN LANDMARK TREES
REPORT - APPENDIX 2

NEW TREE SCREEN FORMED WITH TREE
PITS BROKEN THROUGH EXISTING HARD
STANDING WITH PERMEABLE GRAVEL
COVER. MIXED BROADLEAVES TO MATCH
W1

NEW TREES WITHIN PARKING AREAS FORMED IN
TREE PITS BROKEN THROUGH EXISTING HARD
STANDING WITH PERMEABLE GRAVEL COVER.
PLANTED WITH MIXED BIRCH & MAPLE.
(Petula Pendula and Acer Campestre)

HEDGE SCREEN PLANTING OF COPPER BEECH
(Fagus sylvatica Purpurea)

EXISTING FOOTPATH REINSTATED & REALIGNED FOLLOWING
COMPLETION OF WORKS. EXACT ROUTE TO BE AGREED ON SITE

NEW LANDSCAPING

EXISTING HARDSTANDING

DEVELOPMENT OUTLINE

EXISTING TREES

TREES TO BE REMOVED

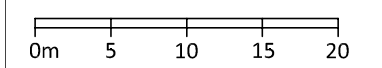
NEW/REPLACED TREES

REALIGNED FOOTPATH

- LEGEND
- REED BEDS
 - WOODLAND (UNSURVEYED)
 - LOADING BAY
 - BIN STORE
 - DELIVERY & REFUSE ROUTE
 - DISABLED PARKING BAY
 - BICYCLE PARKING
 - NEW HARDSTANDING
 - PRECAST CONCRETE SLABS
 - NEW LANDSCAPING
 - EXISTING HARDSTANDING
 - DEVELOPMENT OUTLINE
 - EXISTING TREES
 - TREES TO BE REMOVED
 - NEW/REPLACED TREES
 - REALIGNED FOOTPATH

NOTE:
TO BE READ IN CONJUNCTION
WITH ARBORICULTURAL IMPACT
ASSESSMENT REPORT PREPARED
BY LANDMARK TREES, SEPTEMBER
2011

NOTES:
Building footprint and parking layout shown on
site plan drawing (September 1996) provided by
Waterman Partnership Consulting Engineers



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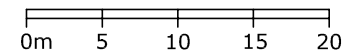
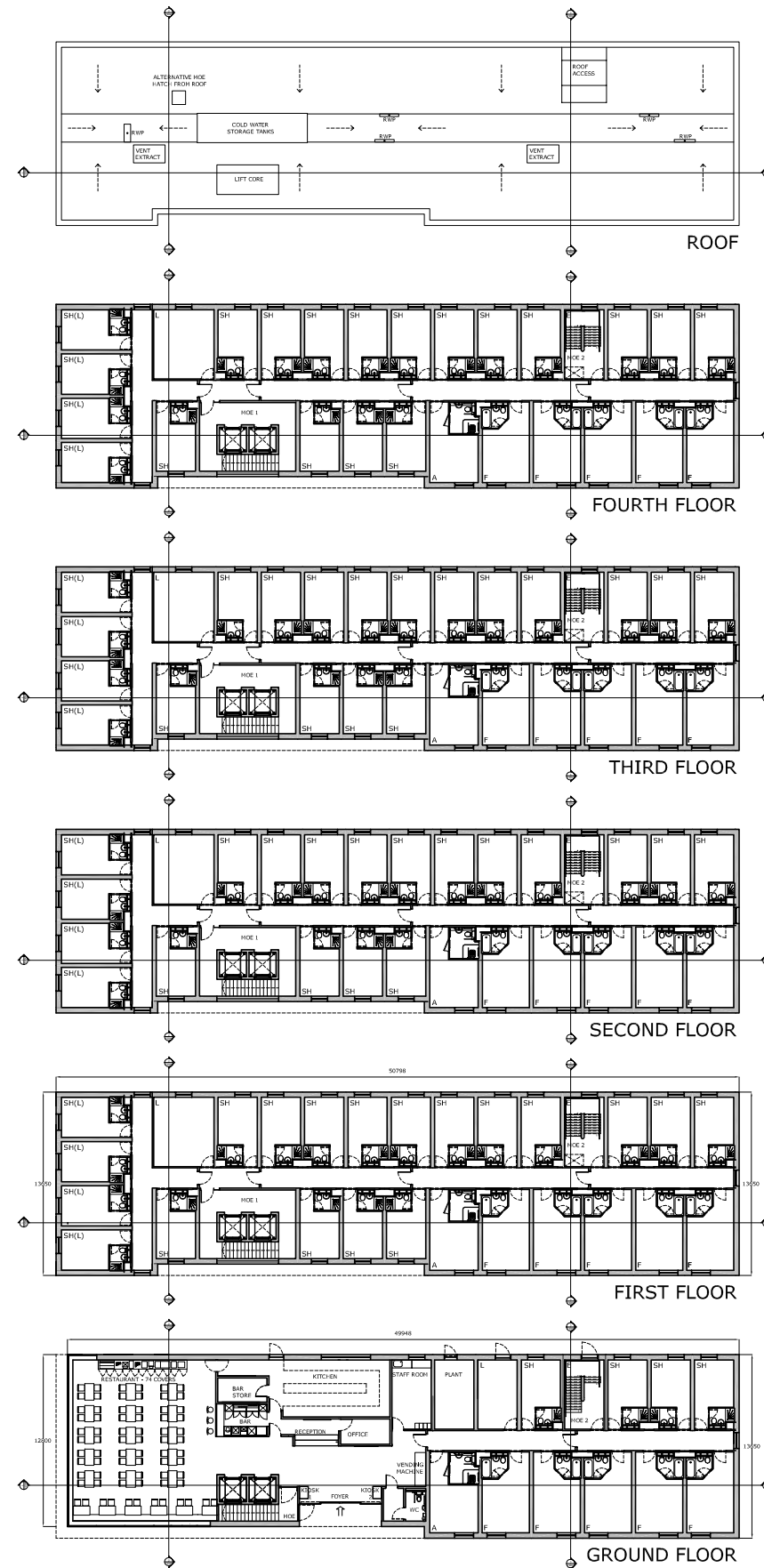
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PROJECT

HOTEL BLUEWATER

DRAWING TITLE
PROPOSED EXTERNALS &
LANDSCAPE PLAN

DATE	DRAWING NO.	REVISION
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SCALE		
1:500 @ A3	P1007	A
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1228		



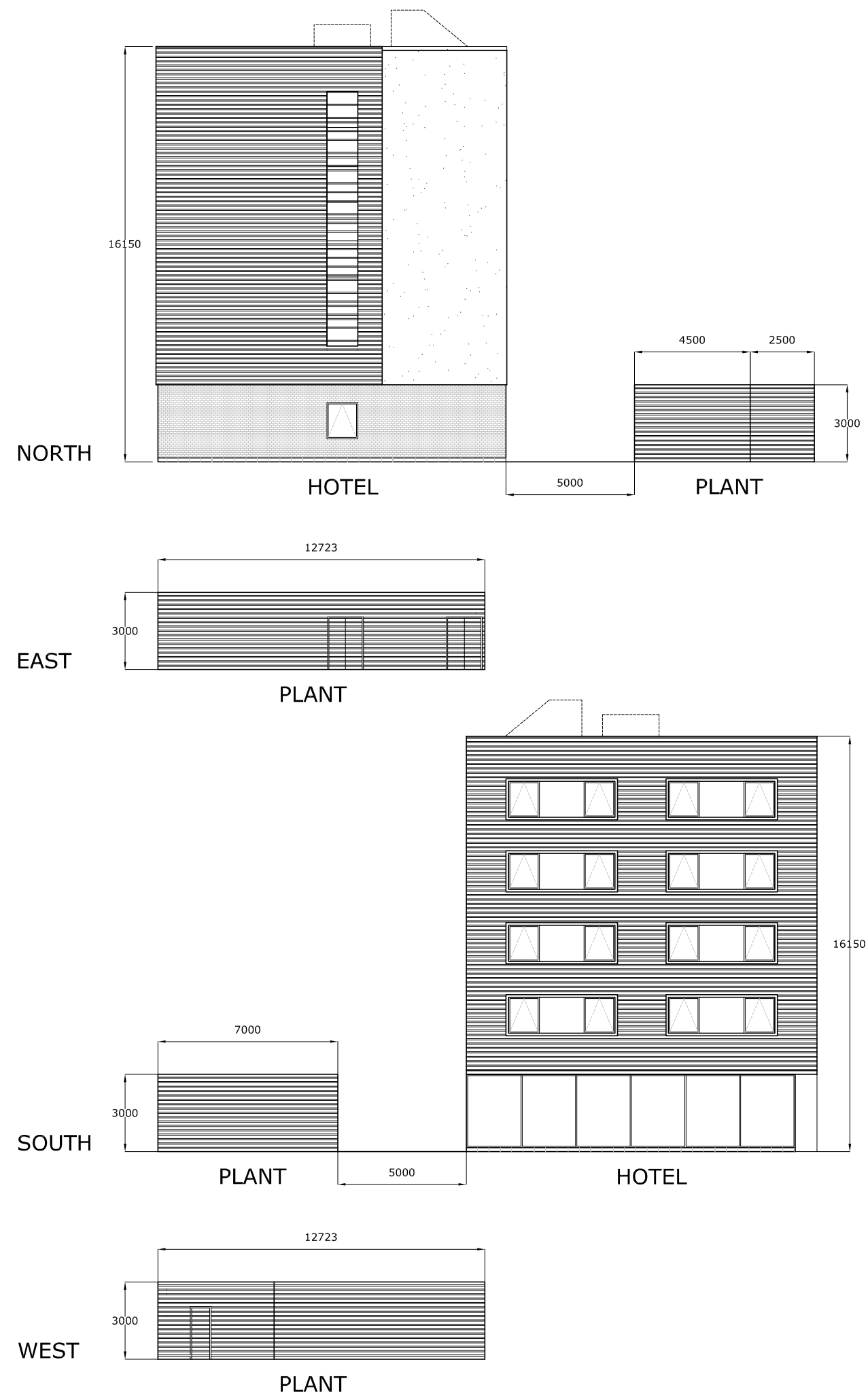
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PROJECT
 HOTEL BLUEWATER

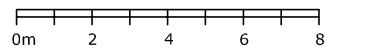
DRAWING TITLE
 PROPOSED PLANS

DATE	DRAWING NO.	REVISION
16/12/11		
SCALE		
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JOB NO.		
1228		



SITE PLAN EXTRACT at 1:500

NOTES:
External Plant with horizontal timber cladding to match hotel



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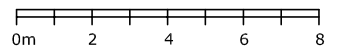
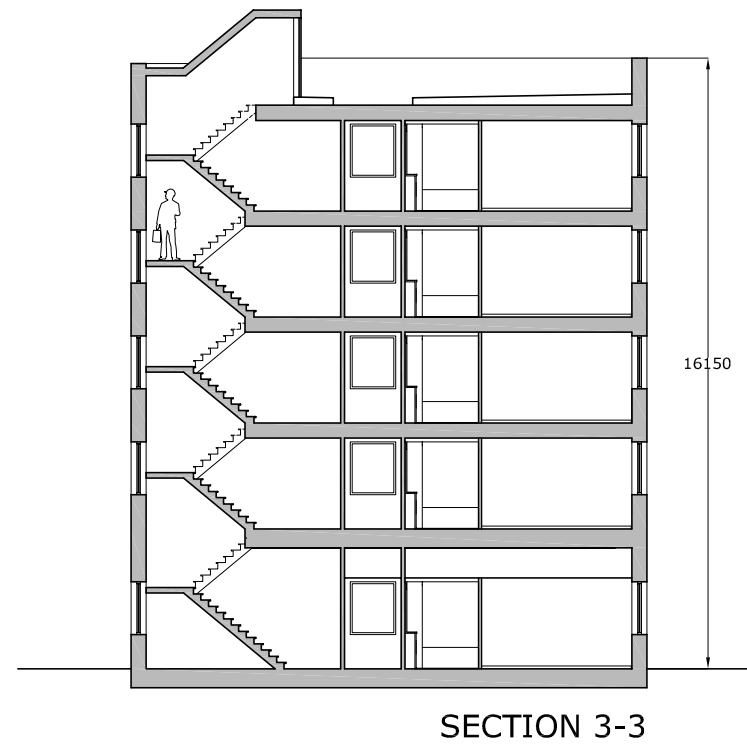
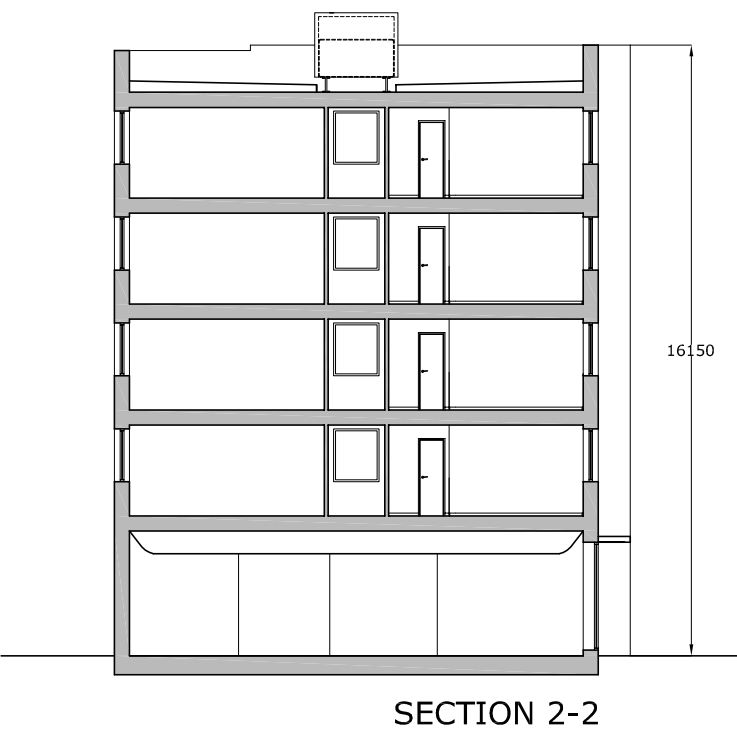
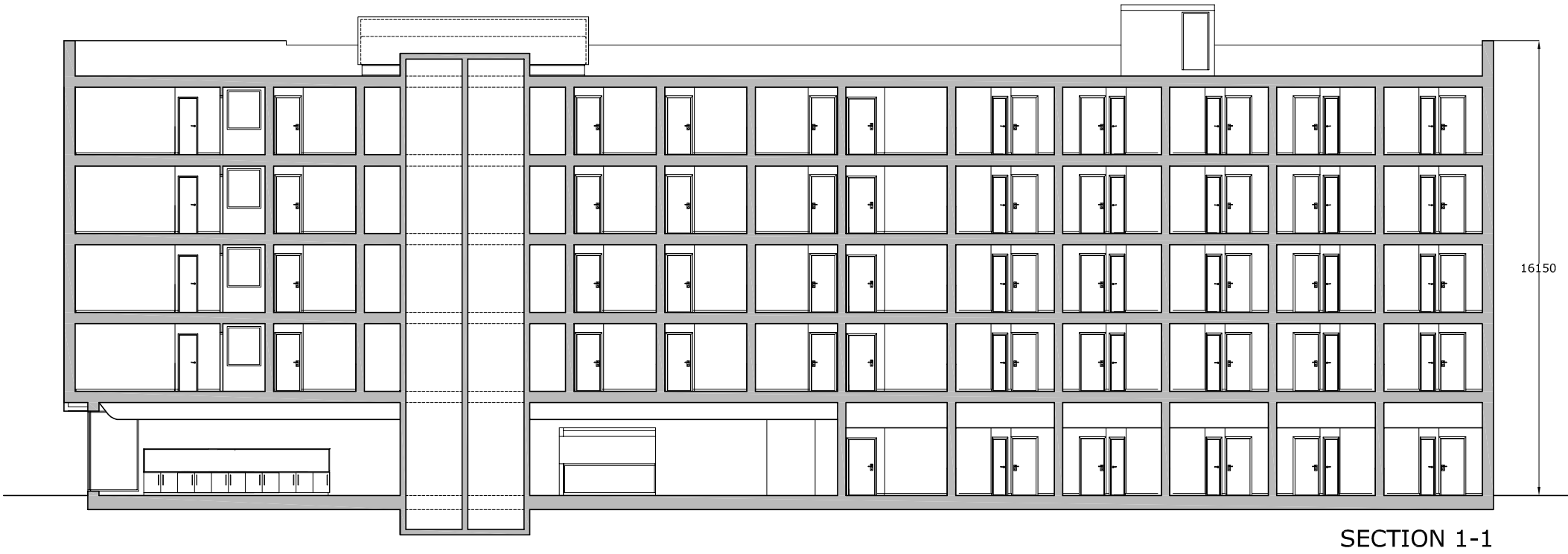
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PROJECT

HOTEL BLUEWATER

DRAWING TITLE
PROPOSED PLANT ROOM
ELEVATIONS

DATE	DRAWING NO.	REVISION
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PROJECT
 HOTEL BLUEWATER

DRAWING TITLE
 PROPOSED SECTIONS

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JOB NO.		
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LEGEND

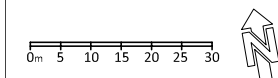
-  REED BEDS
-  WOODLAND (UNSURVEYED)
-  LOADING BAY
-  BIN STORE
-  EXTERNAL PLANT / FUEL STORE
-  DELIVERY & REFUSE ROUTE
-  ACCESSIBLE PARKING BAY (x6)
-  BICYCLE PARKING (x24)
-  NEW HARDSTANDING
-  HARDSTANDING RETURNED TO LANDSCAPING
-  EXISTING HARDSTANDING
-  DEVELOPMENT OUTLINE
-  EXISTING TREES
-  TREES TO BE REMOVED
-  NEW/REPLACED TREES
-  REALIGNED FOOTPATH

FOR LANDSCAPING SEE JUICE P1007

PARKING:
- 6 ACCESSIBLE SPACES
- 82 STANDARD SPACES (2.4m x 4.8m)
- 24 BICYCLES

NOTES:

Building footprint and parking layout shown on site plan drawing (September 1996) provided by Waterman Partnership Consulting Engineers



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HOTEL BLUEWATER

DRAWING TITLE

PROPOSED LOCATION PLAN

DATE

16/12/11

SCALE

1:1250 @ A3

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1228

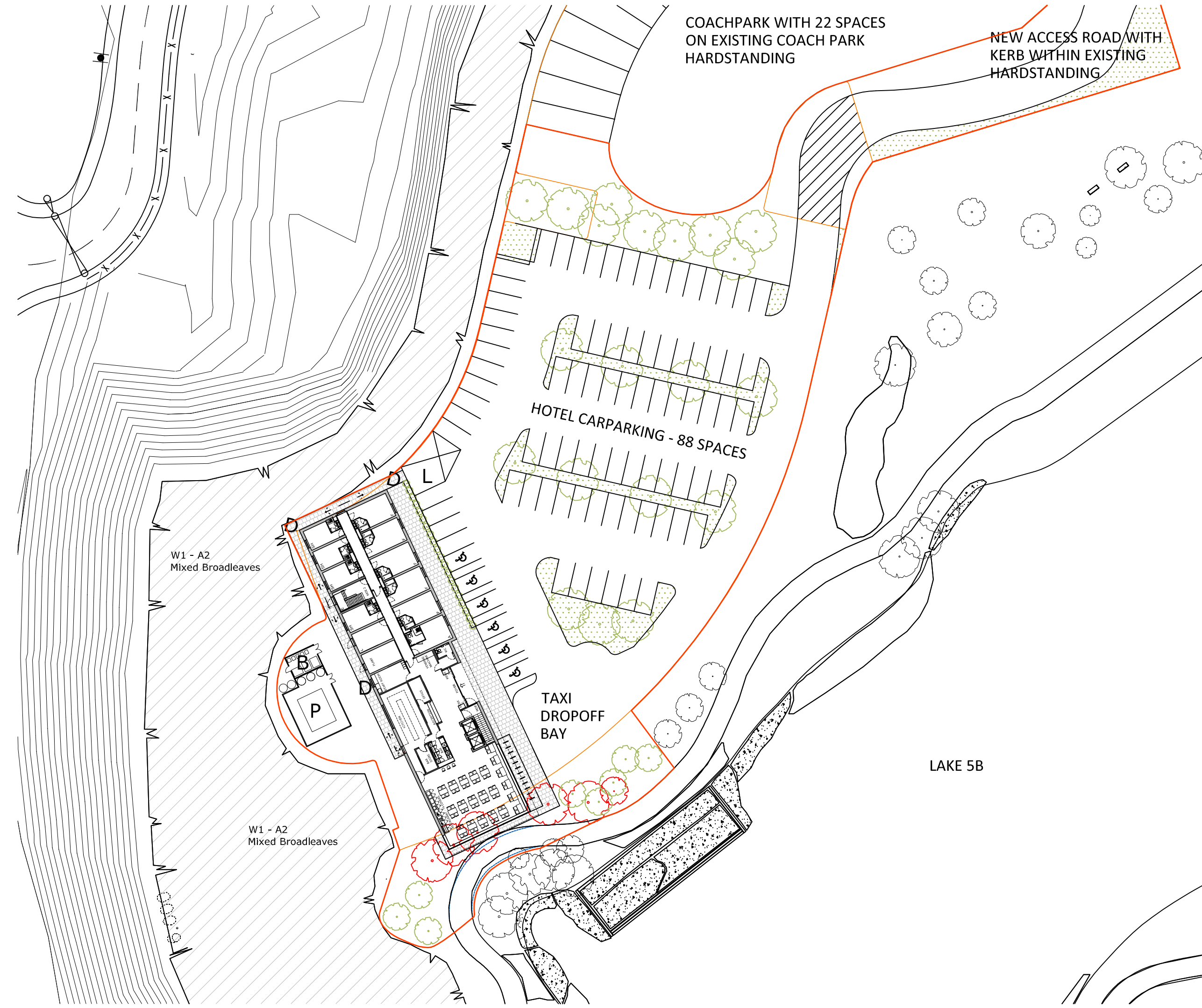
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P1003

REVISION

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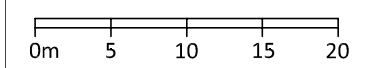


- LEGEND
- REED BEDS
 - WOODLAND (UNSURVEYED)
 - LOADING BAY
 - BIN STORE
 - EXTERNAL PLANT / FUEL STORE
 - DELIVERY & REFUSE ROUTE
 - ACCESSIBLE PARKING BAY (x6)
 - BICYCLE PARKING (x24)
 - NEW HARDSTANDING
 - HARDSTANDING RETURNED TO LANDSCAPING
 - EXISTING HARDSTANDING
 - DEVELOPMENT OUTLINE
 - EXISTING TREES
 - TREES TO BE REMOVED
 - NEW/REPLACED TREES
 - REALIGNED FOOTPATH

FOR LANDSCAPING SEE JUICE P1007

PARKING:
- 6 ACCESSIBLE SPACES
- 82 STANDARD SPACES
(2.4m x 4.8m)
- 24 BICYCLES

NOTES:
Building footprint and parking layout shown on
site plan drawing (September 1996) provided by
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HOTEL BLUEWATER

DRAWING TITLE
PROPOSED SITE PLAN

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SCALE		
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1228		

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PANORAMIC VIEW FROM SOUTH EAST ACROSS LAKE



PANORAMIC VIEW FROM SOUTH



PANORAMIC VIEW FROM EAST

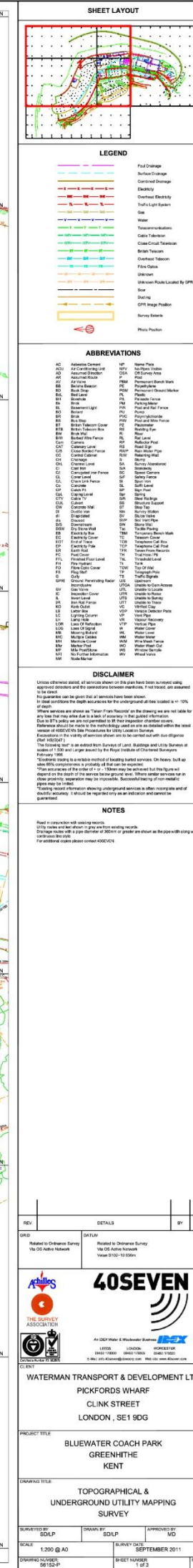
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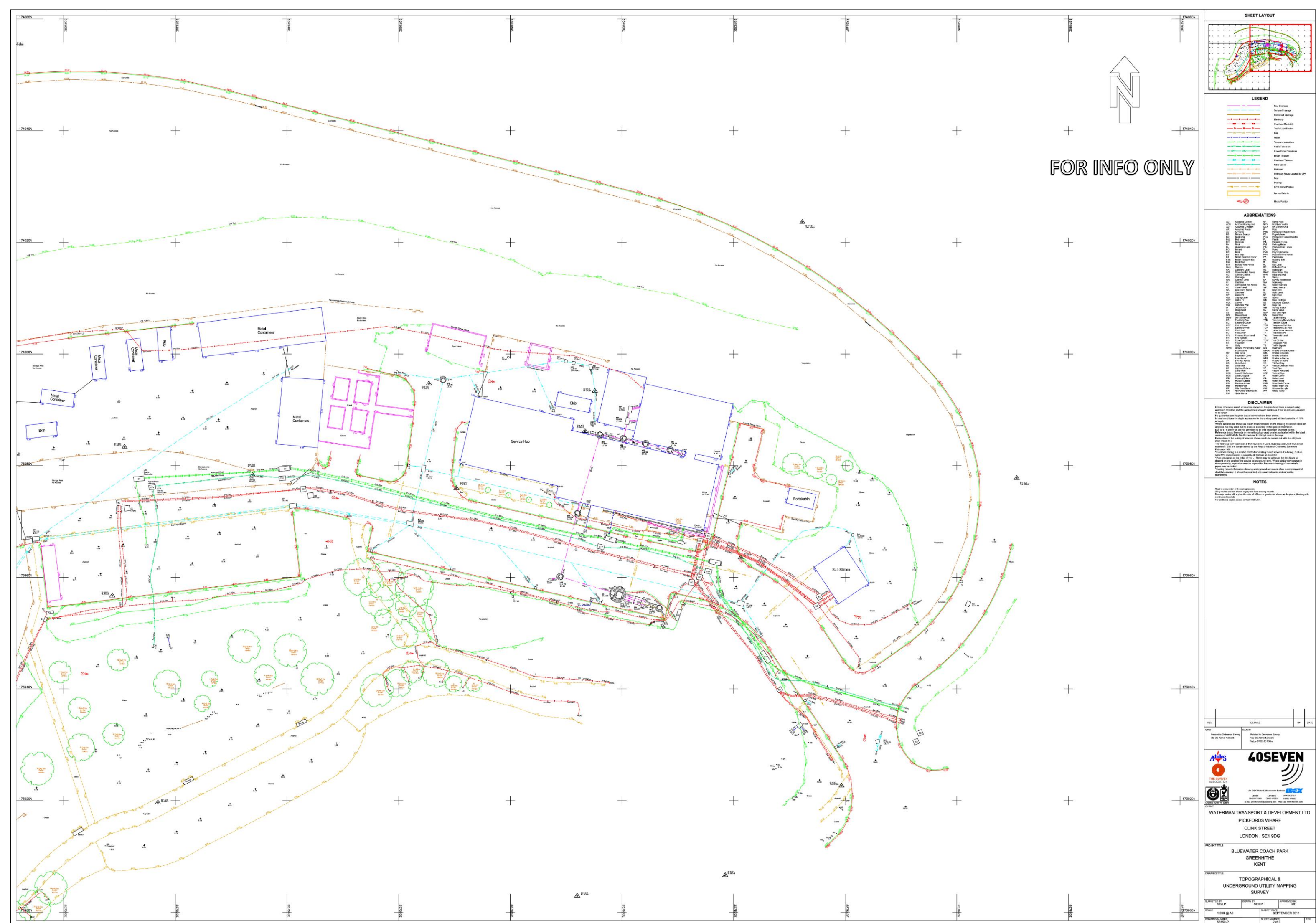
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HOTEL BLUEWATER

DRAWING TITLE
SITE PHOTOGRAPHS

DATE	DRAWING NO.	REVISION
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SCALE		
nts @ A3	P1004	A
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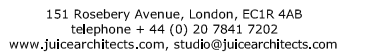
NOT

Read in conjunction with existing records.
Utility markers and feet shown in gray are from existing records.
Drainage routes with a pipe diameter of 300mm or greater are shown as the pipe with along centerlines line style.
For additional content please contact 430.923.4734

FOR INFO ONLY



REV	DETAILS	BY
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PROJECT TITLE		
BLUEWATER COACH PARK GREENHITCH KENT		
DRAWING TITLE		
TOPOGRAPHICAL & UNDERGROUND UTILITY MAPPING SURVEY		
SURVEYED BY	DRAWN BY	APPROVED BY
SCALE: 1:200 @		DATE: 10 SEPTEMBER 2011
DRAWING NUMBER	D-GET NUMBER	



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HOTEL BLUEWATER

DRAWING TITLE
TYPICAL FLOOR PLANS

DATE	DRAWING NO.	REVISION
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SCALE		
1:200 @ A3		
JOB NO.		
1228		